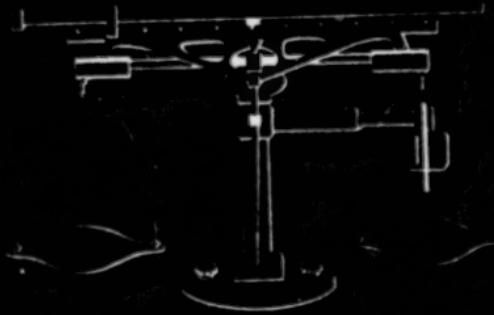


Consumer Reports



BUYING GUIDE
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CONSUMER REPORTS BUYING GUIDE ISSUE

FOR THE USE OF CU MEMBERS THROUGH 1944

PUBLISHED BY CONSUMERS UNION, INC.
17 UNION SQUARE, NEW YORK CITY

The purposes of Consumers Union, as stated in its charter, are "to obtain and provide for consumers information and counsel on consumer goods and services . . . to give information and assistance on all matters relating to the expenditure of earnings and the family income . . . to initiate and to cooperate with individual and group efforts seeking to create and maintain decent living standards."



CONSUMERS UNION OF UNITED STATES, INC. 17 UNION SQUARE, NEW YORK

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How to Use the Buying Guide

Whether you buy carefully or carelessly is pretty much a matter of habit. If you make a practice of planning and considering your purchases *before* you make them you can quickly develop habits which will help cut your family's living expenses materially, and give you greater satisfaction from the things you buy and use.

One of the best ways of developing careful buying habits is to use CU's ratings and buying advice regularly. Before you go out to shop, make a list of the things you need. Then look in two places to see what help CU can give you. Look first in the Cumulative Index, which is on one of the back pages of the latest issue of *Consumer Reports*. If anything has been published about the products you are interested in since the current *Buying Guide* appeared, you will find reference to it in the Cumulative Index. If there are references, look them up. If not, look for ratings or information in the *Buying Guide*. Check any ratings or buying advice that seem to fit your needs. Then, with slips of paper or clips, mark the pages and take the material with you to use while you shop. If this isn't feasible, jot down on the list of things you have to buy the names of "acceptable" brands you want to shop for along with reminders on points of workmanship, construction and materials to look for or to avoid.

Don't — especially in these days — make up your mind that only one particular brand will do, and that you must have that. It would be nice if the leading "Best Buys" and the brands at the very top of the quality lists were all available everywhere in the United States. CU can't control the distribution of

products, however, and if a brand sold only in Los Angeles or Chicago turns out to be best, there's nothing CU can do to make it available to members in Seattle or New York.

But it isn't necessary at one jump to go the whole way from hit-or-miss buying to insistence on the one best brand. The only practical way to tackle the problem is to make a conscientious effort to *get the best and most economical of the brands available to you*. If you find that a brand that is fifth or even tenth on the acceptable list is the best you can find in your local stores, and you can't get anything better by mail order, then buy the fifth or the tenth with the satisfaction of knowing that the unknown quantity you would get by grab-bag buying might well be twentieth or fiftieth or "Not Acceptable" if put to the test.

If you're planning to buy something not rated by CU or if you can't find a brand with a good rating where you shop, then try to form some judgment of quality yourself. You can't do what the technician working with his instruments in the laboratory can do, but in many cases, especially with clothing and other textile products, you can form some judgment as to probable over-all quality. In a garment, for example, if you did nothing more than compare the quality of workmanship and type of construction of the buttonholes in two similar garments and found that one was definitely superior to the other, you would be justified in concluding that the manufacturer of the garment with the better buttonholes probably did a better job on other points of construction, too; and that in the absence of other information you would be well advised to buy that garment.

Sometimes, you may be thinking of buying a prod-

uct which isn't touched on at all in this *Guide*. Unfortunately, CU's finances have not yet reached the point where it can cover the entire field of consumer goods. This doesn't mean that you need buy such a product haphazardly, however.

Shop in a few stores before you make your selection. Ask questions, examine materials and constructions, and compare. Listen to sales claims critically, don't just accept them on face value. Study labels, and ask for explanations of unfamiliar terms. You'll be a better buyer in the third store than you were in the first. Stores have comparison shoppers to do their looking (without buying). They're not losing money by it. You won't either.

To get the most out of your *Buying Guide*, you should leaf through the whole book every once in a while, in addition to looking up specific references. The *Guide* contains a great deal of useful information on the care and repair of household items, advice on matters of health and nutrition, and a wide range of other material that can save you money and help make you a better all-round consumer.

● WATCH FOR CHANGES

Before you use ratings in the *Buying Guide*, check to see whether later ratings have appeared in the monthly *Reports*. In the past, any product — small private brand or big national brand — was subject to change at any time without any notice to consumers or even to retailers. With scarcities of raw materials and shifts in the market growing out of the war situation, the likelihood of change is now even greater.

While CU will retest, during the year, as many products as possible, there will be many changes which CU will not be able to check. Wherever possible, supplement the ratings with careful examina-

tion of a product you are considering, looking for special points of materials and construction described in the *Guide* and *Reports*. In the absence of other information, even when the products are changed, you are more likely to get a good buy from a manufacturer who previously made good products than from one whose products previously ranked low.

● WHAT'S IN THE GUIDE

The *Buying Guide* contains (1) material which previously appeared in the *Reports*, condensed for publication in one compact and handy volume, and brought up-to-date wherever possible; (2) new material not previously published in the *Reports*. Notable among such material is that on health, and foods and nutrition.

The ratings and buying advice given in the following pages supersede the contents of all previous *Guides* and all regular issues of the *Reports* prior to November 1942. Ratings of products tested more than a year ago have been brought up to date wherever possible, or have been included only where it has seemed unlikely that quality changes have seriously affected relative standing of products.

● THE RATINGS

Endless care has been expended to insure the accuracy of the ratings. Ratings of products represent the best judgment of staff technicians, consultants or both. Samples for test are obtained on the open market by CU's shoppers. Ratings are based on laboratory tests, carefully controlled use tests, the opinion of qualified authorities or the experience of a large number of persons, or on a combination of these factors. It is not unlikely, however, that new investigations or data will bring to light some errors of fact or judgment. Any such will be corrected promptly in the *Reports*.

Most ratings of necessity reflect opinion as well as scientific data. And even with rigorous tests, interpretation of findings is often a matter on which expert opinion differs. It is Consumers Union's pledge that such opinions as enter into its evaluations shall be as competent, honest, and free from bias as possible.

"Best Buys" should give greater return per dollar although some products rated "Acceptable" may be of higher quality. Except where noted, a product rated "Not Acceptable" is judged to be of very poor quality or potentially harmful.

● HOW HONEST ARE CU'S RATINGS?

(Reprinted from the May 1940 Reports)

Almost every member of Consumers Union has encountered a storekeeper or a clerk who knew as incontrovertible fact that CU's "Best Buy" ratings are paid for or that some manufacturer got a "Not Acceptable" rating because he refused to pay.

By now we are familiar enough with this sort of cynicism to know that most of the people who say such things say them not out of malice. They say them partly because the whole concept of consumer testing organizations is still so new as to be unfamiliar to them, partly because the excesses and deceptions of much advertising have made them suspicious of almost any product information, and partly because, in this racket-ridden age, it seems to them incredible that good ratings would go to the good products and not to the highest bidders.

These people generally mean no harm, but serious harm to Consumers Union can often result from their irresponsibility. Let us state the facts for the record, and enlist the help of CU members in keeping the record straight.

(Continued next page)

Consumers Union has never received any remuneration of any nature for rating or for not rating any product or for giving it a good rating or a bad one.

Every rating that has ever been made by Consumers Union has been determined by tests, examination or use, or by the unbiased opinion of qualified authorities, and in no other ways.

Consumers Union accepts no gifts of samples from manufacturers (it returns them when they are sent) and it will not sell copies of its Reports to manufacturers or distributors for promotion use.

Such are the facts. And now a request to CU members : if you ever hear anyone say that he knows that some CU rating has been bought or improperly influenced in any way, please ask him to write down what he says and sign his name to it ; and then please send us the document.

Consumers Union takes full responsibility for the integrity of its work.

We think it is fair to ask anyone who impugns that integrity to assume responsibility for doing so, and the consequences thereof.

● **PRODUCTS NOT LISTED**

Many hundreds of thousands of brands of consumer goods are found in the nation's marketplace, and these are grouped into thousands of types and kinds. This *Buying Guide* issue does not, of course, offer complete coverage of all these products.

It would require the resources of the United States Government itself to test and report on even a majority of the brands to be found. And the testing and reporting of Consumers Union — whose resources are a good deal less than those of the Government — are necessarily confined to the most widely available brands and types.

• PRICES

With few exceptions (which are noted) the prices given in the following pages are those at which the samples tested were purchased. The prices should, therefore, be considered only as a rough guide. In most cases, ratings are in order of quality, and price changes will not affect the position of a brand in the quality list. Where all brands of a product have been affected more or less similarly by price changes, the "Best Buy" ratings will not be materially affected.

• MAIL-ORDER BUYING

Numerous mail-order products are listed in CU's ratings because they are available everywhere and are frequently good buys. They are not always worth buying; in a number of cases, they have been among the poorest tested. But with large purchases particularly, it is often worth while to take the trouble to order by mail.

Members are therefore urged to get the catalogs of Sears-Roebuck and Montgomery Ward (both of Chicago), and other mail-order houses and to use them in buying products which have been rated as outstanding buys. In a number of cities telephone orders are accepted by both Sears' and Ward's.

In many cases products listed in the catalogs are not sold in the retail stores of the mail-order companies. Unless the salesman can prove to your satisfaction that the product sold in the store is the same as the product you are looking for, order it through the catalog desk located in the store. Even where the products are the same, it is usually cheaper to order through the catalog than to pay the retail store price.

Many Cooperative brands are included in the ratings. Among these are CD (Cooperative Distributors) products. Cooperative Distributors is a mail-

order cooperative with offices and salesrooms at 13 Astor Place, NYC. Members wishing to buy from CD should write for their catalog.

Before accepting shipments sent by freight from mail-order houses, consumers should make sure that the goods are not damaged. If the goods become damaged, and you accept them, you will have to pay for repairs yourself, unless the mail-order company can collect damages from the railroad or freight company. But you are entitled to refuse to accept a damaged shipment.

● **AVAILABILITY OF PRODUCTS**

At the request of many CU members, information on the areas or stores where products can be purchased has been added to ratings in the *Reports*. Since this information has been gathered only during the four or five months preceding the publication of this book, statements of availability will appear with some product ratings and not with others. If you can't find a brand you want in the stores where you shop, a post card to the manufacturer may bring you the name of a local distributor.

There are a number of listings of products distributed by the Associated Merchandising Corp. Following is a list of retail stores, members of the AMC:

Hutzler's, Baltimore; Filene's, Boston; R. H. White, Boston; Abraham & Straus, Brooklyn; John Shillito, Cincinnati; Wm. Taylor, Cleveland; Lazarus Co., Columbus, Ohio; Rike-Kumler, Dayton, Ohio; Hudson's, Detroit; L. S. Ayres, Indianapolis; Bullock's, Los Angeles; Burdine's, Miami; Boston Store, Milwaukee; Dayton Co., Minneapolis; Bloomingdale's, NYC; Capwell's, Oakland, Calif.; Strawbridge & Clothier, Philadelphia; Joseph Horne, Pittsburgh; Thalhimer's, Richmond, Va.; For-

man's, Rochester, N. Y.; The Emporium, San Francisco; Stix, Baer & Fuller, St. Louis.

● GOVERNMENT PUBLICATIONS

Government publications which are free can be obtained from the department issuing them. Publications for which there is a charge are obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C. Remittance may be made by check, money order, document coupons, or currency (at sender's risk), but *not* by postage stamps. The most convenient method is to keep on hand a supply of 5-cent document coupons, which may be bought from the Sup't of Documents, 20 for \$1.

● LABOR NOTES

Labor conditions under which many products are manufactured are described in most issues of the *Reports* in supplementary notes. These notes are completely independent of the quality ratings, and have no bearing on them. Thus, a product receiving a high rating may be made under poor labor conditions and some products receiving low ratings may be made under good labor conditions. Labor notes are not included in the *Buying Guide*. The very swift changes continually taking place in labor relations make it impossible to include here labor data that would remain up to date and reliable.

Ratings which were accompanied by labor notes when they originally appeared in the *Reports* carry a reference line indicating the fact. Members are urged to consult these notes for general labor information but should remember that they are specifically applicable only to conditions prevailing at the time of writing.

FOR VICTORY



BUY
UNITED
STATES
WAR
BONDS
AND
STAMPS

Food Products

The retail price of food in September, 1943 was 8.5% higher than in September, 1942 according to the Bureau of Labor Statistics. Food prices declined somewhat in the Summer of 1943, partly as the result of roll-backs in the prices of meat, butter and certain vegetables. As this book goes to press (November, 1943), the possibility of further food price increases in 1944 is strong. The spread of black markets, the pressure of the food trusts for higher profits, and the possible scrapping of existing consumer subsidies, all make for price advances.

Food shortages in relation to existing civilian demand continue to develop, although none are critical. They are mostly due to the government's failure to adopt an all-out wartime food policy for production and distribution.

Dairy products, in particular, face growing shortages. It is quite likely that milk will have to be rationed in the worst wartime shortage areas. But with the improvement in the shipping situation, sugar—like coffee—may be taken off the ration list.

Red meat supplies will be smaller in 1944 than in 1943 because of increased military and lend-lease requirements. However, there will be plenty of poultry, cereals and eggs. Fresh fruits and vegetables, potatoes, dry edible beans and peas will be available in volume equal to 1943 supplies. There will be smaller civilian supplies of canned fruits and vegetables during the first half of 1944, but during the second half of the year supplies may be larger than in the same period of 1943.

The government expects that the net effect of smaller dairy and meat supplies for civilians will probably mean a diet slightly lower in calories, protein and calcium. But because of the higher levels of bread and flour enrichment, the diet may contain more iron and a greater abundance of the B vitamins. The diet will be plainer but will be adequate and wholesome.

BAKING POWDER

Leavening of dough results from the formation of small bubbles of gas (carbon dioxide), which expand to give the baked product a light, porous structure. Baking powders consist of baking soda (sodium bicarbonate) to

14 BAKING POWDER

furnish the carbon dioxide, another chemical to release the gas from the soda, and starch. Starch serves two purposes: by absorbing moisture it helps to prevent the baking powder from decomposing in the can; by increasing the bulk of the powder it simplifies the task of mixing it evenly through the batter.

There are three main types of baking powder, differing chiefly in their gas-releasing ingredient.

The tartrate type contains cream of tartar and often tartaric acid. If unbaked dough containing this type of baking powder is allowed to stand, all the available carbon dioxide will be evolved, before the dough is baked.

The phosphate type contains calcium acid phosphate. Its action is much slower; if unbaked dough is allowed to stand, only two-thirds of the available carbon dioxide is evolved; the remainder is formed during baking.

The phosphate-alum (so-called "double acting") type, containing sodium aluminum sulfate and calcium acid phosphate, liberates only one-fifth to one-third of the available carbon dioxide in unbaked dough, the rest during baking.

There is no evidence that the residues left in the dough by any type of baking powder are harmful. The sodium and calcium phosphates left by the phosphate powders may have some slight nutritional value as a mineral supplement to the diet. There is some evidence that calcium phosphate is also useful in preventing loss of vitamin B₁ from enriched flour.

If a cake is put into the oven quickly after the baking powder is added, one type of baking powder is as efficient as another. But if there is apt to be some delay between the mixing and the baking, a slower acting powder has some advantages.

Should you change from one type to another, or to a different brand of the same type, it may be necessary to make a slight change in the amount of baking powder used in a recipe. Most brands state on their labels the quantity to be used with a given amount of flour.

Baking powder must be kept dry to remain effective. Most of the cardboard or fiber containers that have replaced the metal tins keep out atmospheric moisture adequately. Of the various types of closures, the plug-top—the kind you pry open—seems better than the sleeve

or lock-top types. Moisture-proof paper drumheads are also satisfactory. Once the container is opened, don't leave it open longer than necessary, and close it tightly when you are finished. If the closure of the original container is not tight, it might be wise to transfer the powder to a glass jar, fitted with an air-tight screw cap.

CU tested one to four samples of each of 18 brands of baking powder for available carbon dioxide, and for the presence of impurities like lead, arsenic and heavy metals. All brands were practically free from these impurities. The condition of the container and the powder inside were also noted.

Ratings are in order of increasing cost per ounce as related to the available carbon dioxide. The F & DA requires a minimum of 12% available carbon dioxide for all types of baking powder; brands containing less were rated "Not Acceptable." Where a brand contained more than the minimum, the cost per ounce as calculated was proportionately reduced. The figures in parentheses represent the cost per ounce, weighted in this way.

From the *Reports*, January 1943.

TARTRATE TYPE

ACCEPTABLE

Macy's Lily White (Macy Dep't Store, NYC). 12½ oz., 33¢. (2.6¢).

Schilling (A. Schilling and Co.). 6 oz. 17¢ (2.8¢).

Royal (Standard Brands). 6 oz., 21¢. (3.4¢).

PHOSPHATE TYPE

BEST BUY

Co-op (National Cooperatives). 1 lb., 19¢. (1¢).

ACCEPTABLE

Co-op (see "Best Buy").

Rumford (Rumford Chemical Works). 12 oz., 21¢. (1.6¢).

Dr. Price's (Standard Brands). 4 oz., 10¢. (2.7¢).

Jewel T (Jewel Tea Co.). 1 lb., 51¢. (2.9¢).

NOT ACCEPTABLE

Asco (American Stores Co.). 4 oz., 5¢. 8 oz., 8¢. 1 lb., 17¢. (2.2¢). Available carbon dioxide considerably below the minimum allowed. Container was not moistureproof which probably accounts for the low available carbon dioxide.

(Continued next page)

PHOSPHATE-ALUM TYPE

BEST BUY

Island Manor (H. C. Bohack & Co.). 12 oz., 9¢. (.5¢).

ACCEPTABLE

Island Manor (see "Best Buy").

Clabber Girl, Double Acting (Hulman and Co.). 10 oz., 9¢. (.7¢).

Co-op Double Acting (National Co-operatives, Inc.). 1 lb., 17¢. (.9¢).

K C Double Acting (Jaques Manufacturing Co.). 10 oz., 9¢. (.9¢).

Davis O K Double Acting (R. B. Davis Co.). 8 oz., 8¢ (.9¢).

Calumet Double Acting (General Foods). 12 oz., 13½¢. (1¢).

Ann Page Double Acting (A & P). 12 oz., 1½¢. (1¢).

David D-Y Double Acting (R. B. Davis Co.). 8 oz., 16¢. (1.8¢).

Watkins Double Acting (J. R. Watkins and Co.). 1 lb., 35¢. (2¢).

NOT ACCEPTABLE

Red and White (Red and White Corp.). 1 lb. 17¢ (1¢).

Available carbon dioxide below the minimum allowed.

"HEALTH DRINKS"

Thirty-four "health drinks" were tested. The majority are made with milk, which contributes greatly to their nutritional value. Any added vitamins or minerals are too slight in amount to make significant additions to the diet. Brands containing soy beans are relatively high in nutritive value. However, CU's tasters found that only when masked by another strong flavor are soy beans palatable in this form.

From the *Reports*, July 1943.

Listed in groups according to taste preference. The ingredients are listed with each brand. Figure in parentheses is approximate cost per cup. When made with milk, bear in mind that the cost per cup is increased by as much as 4¢.

GOOD

Nestlé's Hot Chocolate. 3 packages, 10¢ (3.3¢). Chocolate, sugar, skim milk, salt, vanillin. Made with water.

Bosco. 12 oz., 19¢ (0.8¢). Sugar, cocoa, malt, vanillin. Added vitamin D, iron and phosphorus. Made with

GOOD—CONT'D

milk. Available nationally.

Dietetic Casein Cocoa. 2½ oz., 30¢ (1.6¢). Cocoa, casein. Made with milk.

Cocomalt. 1 lb., 45¢ (1.6¢). Cocoa, malt, sugar, skim milk, salt, imitation vanilla. Added vitamin A, B₁, D, iron, calcium, phosphorus. Made with milk.

Nestlé's Cocoa. 8 oz., 19¢ (1.1¢). Cocoa, sugar, milk, salt, vanillin. Made with water. Available nationally.

Cheer. 5 oz., 39¢ (1.4¢). Cocoa, sugar, cottonseed flour, vanilla flavored. Added vitamin B₁. Made with milk (when made with water, it was considered "Poor").

Ovaltine. 8 oz., 34¢ (1.9¢). Cocoa, malt, sugar, milk, eggs, salt, irradiated yeast. Added vitamin A, B₁, D, G, nicotinic acid, iron, calcium, phosphorus. Made with milk. Available nationally.

Malted Soya Milk Choklateen. 1 lb., 75¢ (4.7¢). Soybean, lecithin, sugar. Added calcium. Made with milk (with water, it rated next to last under "Good").

McBride's Chocolate Soya-Malt. 8 oz., 35¢ (1.8¢). Cocoa, chocolate, malt, sugar, defatted milk, soybean, wheat embryo, salt, carob. Added vitamin A, B, D, E, G, calcium, phosphorus, iron, copper, potassium, manganese. Made with milk (when made with water, it was considered "Fair").

Penna's Soy Cocoa. 1 lb., 65¢ (1.2¢). Soybean, cocoa, sugar. Made with milk (when made with water, it was considered "Fair").

Bragg Tava. 8 oz., 98¢ (5.4¢). Cocoa, malt, sugar, milk, almond meal, salt, flavored with vanilla and tonka beans. Added vitamin A, B, C, D, G, nicotinic acid, iron. Made with milk (when made with water, it was considered "Fair").

Kevo. 7 oz., 40¢ (1.2¢). Soybean, germ of whole wheat, sugar, skim milk, malt, kelp, mint, rhubarb, spinach, carrot, celery. Made with milk (when made with water and evaporated milk, it was considered "Fair").

Penna's Soy Cocoa Malt. 1 lb., 65¢ (1.0¢). Soybean, malt, cocoa, sugar. Made with milk (when made with water, it was considered "Fair").

Joyana Chocolate. 10 oz., 49¢ (3.3¢). Soybean, malted milk, malt, sugar. Added vitamin A, B, C, D, G. Made with milk.

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18 "HEALTH DRINKS"

FAIR

McBride's Almond Soy-Malt. 8 oz. 35¢ (1.8¢). Soybean, malt, wheat embryo, sugar, defatted milk, salt, almonds. Added vitamin A, B, C, D, E, G, calcium, phosphorus, iron, copper, potassium, manganese. Made with milk (when made with water, it was considered "Poor").

Melvite. 1 lb., 59¢ (2.6¢). Soybean, malted milk, sugar, egg yolk, milk. Added vitamin D. Made with milk (when made with water, it rated next to last under "Fair").

Hemo. 1 lb., 59¢ (1.4¢). Milk, malt, sugar, whole wheat, cocoa, salt. Added vitamin A, B, D, G, calcium, phosphorus, iron. Made with milk (when made with water, it was considered "Poor").

Nut Malted Soya Milk. 1 lb., 75¢ (5.4¢). Soybeans, lecithin, sugar. Added calcium. Made with milk (when made with water, it was considered "Poor").

Banana Malted Soya Milk. 1 lb., 75¢ (4.4¢). Soybeans, lecithin, sugar. Added calcium. Made with milk (when made with water, it was considered "Poor").

Health Koko. 8 oz., \$1.25 (1.8¢). Cocoa, sugar, vanilla. Made with milk.

Soya Mocha Malted Soya Milk. 1 lb., 75¢ (3.9¢). Soybeans, lecithin, sugar. Added calcium. Made with milk (when made with water, it was considered "Poor").

Stamina. 10 oz., \$1 (3.7¢). Soybean, cocoa, malt, corn syrup, molasses, banana. Made with milk.

Joyana, Plain. 10 oz., 49¢ (2.7¢). Soybean, malted milk, sugar, malt. Added vitamin A, B, C, D, G. Made with milk.

Penna's Soy Cocoa Malt. 1 lb., 68¢ (1.1¢). Soybean, malt, cocoa, sugar. Made with water.

POOR

McBride's Plain Flavor Soya-Malt. 8 oz., 35¢ (1.7¢). Soybean, malt, defatted milk, sugar, wheat embryo, salt. Added vitamin A, B, D, E, G, calcium, phosphorus, iron, copper, potassium, manganese. Made with milk or water.

Penna's Soy Coconut. 8 oz., 35¢ (1.2¢). Soybean, coconut, sugar. Made with milk or water.

Penna's Soy Co-Bana. 8 oz., 35¢ (1.2¢). Soybean, coconut, banana, sugar. Made with milk or water.

POOR—CONT'D

Penna's Soy Banana. 8 oz., 35¢ (1.1¢). Soybean, banana, sugar. Made with milk or water.

Soy-Malt. 1 lb., 65¢ (0.6¢). Soybean, malt. Made with milk or water.

Soy-A-Malt Chocolate. 8 oz., 40¢ (2.4¢). Soybean, sugar, malt, vegetable oil, sea salt. Added calcium, phosphorus. Made with water.

McBride's Banana Soya-Malt. 8 oz., 35¢ (1.8¢). Soybean, malt, defatted milk, wheat embryo, sugar, salt, banana. Added vitamin A, B₁, D, E, G, calcium, phosphorus, iron, copper, potassium, manganese. Made with milk or water.

The following are ready-to-drink soy "milks," that come in sealed cans. Since they all proved equally unpalatable, they are listed according to increasing cost per cup.

Soy Milk (Loma Linda Foods). 1 lb., 17¢ (8.5¢). Soybean, vegetable oil, sugar, salt. Added vitamin A, B₁, D, G, calcium, phosphorus, iron, copper.

Kreme O'Soy (Madison Foods). 15 oz., 19¢ (9.5¢). 29 oz., 25¢ (6.3¢). Soybean, soy oil, sugar. Added calcium and phosphorus.

Soy Milk (Battle Creek Food Co.). 1 pint, 30¢ (15¢). Soybean, soy oil, sugar, salt. Added vitamin A, B₁, C, D, G, calcium, phosphorus, iron, iodine.

SOFT DRINKS

The base for all sparkling "soft drinks" is ordinary carbonated water ("soda water" or "club soda") — a solution of carbon dioxide gas under pressure in water. Water for carbonation must be clear, colorless, odorless, good to taste and should contain only proper kinds and amounts of minerals and should be free of suspended solid matter and undesirable microbes. Carbonation itself kills or inhibits many kinds of bacteria. There should be enough carbonation to give the water a good taste and the fizz should be retained as long as possible after exposure to air.

Ginger ale is given its distinctive flavor and color by sugar, citric acid, ginger flavor and caramel color added to the carbonated water. Less sugar and more acid make a drier ginger ale. Though they have lower initial carbonation than sodas, most ginger ales retain their carbonation longer.

20 SOFT DRINKS, BREAD, BUTTER

Cola drinks are made mainly from extracts of the cocoa leaf (from which cocaine has previously been removed) and the cola nut, sugar, phosphoric acid, carbonated water and caramel color. Since the amount of sugar used in *Pepsi-Cola* has been cut down, the difference in taste among the dozens of cola drinks is scarcely detectable. *Coca-Cola* still has the dubious distinction of offering half as much for the same price as the others.

From the *Reports*, June 1940, August 1940.

BREAD

Enriched white bread contains most of the important vitamins and minerals present in whole wheat. Do not buy white bread that does not bear the word "enriched" on its label. The cost of enrichment is slight, and bread so made should cost no more than any other.

The enrichment program is sponsored by the government. Bakers are compelled to participate in it and must follow specifications of the Food and Drug Administration regarding the kinds and amounts of vitamins and minerals they include (see "Flour," p. 74).

Whole grain bread is a rich natural source of these important nutritional elements, but many dark breads contain only a small percentage of whole grain flour. It is wise to examine the label of a dark bread to see how much whole grain flour it actually contains.

BUTTER AND OLEOMARGARINE

Increased demands for butter, both for our military forces and for lend-lease have resulted in further decreasing civilian supplies this year. To compensate for this, more oleomargarine ("oleo," "margarine") is being made available for civilian use.

If you are able to get butter, CU recommends creamery butter of Special or Extra grade (92 score or over) for table use, and Standard grade (90 or 91 score) for cooking. You can make your table butter supply stretch a little further by removing from the refrigerator the portion to be used at a meal, and letting it come to room temperature before use. Or you can let it soften and whip air into it (with an egg beater), then re-cool and serve.

More effective in extending your butter supply is to whip evaporated milk into it, in the proportion of $\frac{3}{4}$ cup evaporated milk to $\frac{1}{2}$ pound butter. Full directions on this and another butter extender are given in the March 1943 *Reports*.

Oleomargarine is a far better buy than butter, both in price and in point value. Authorities say that it is the equal of butter in food value, and taste tests conducted by CU show that the average consumer can't tell the difference, as far as taste is concerned, between butter and the better brands of oleo.

Nutritive Value: Both butter and oleo must, by law, contain no less than 80% fat. But while butter is the fat made from churning milk, the fat in oleo comes from one of several animal or vegetable sources, which are churned with skim milk and small amounts of other ingredients.

Butter is a good natural source of vitamin A; oleo sold at retail is fortified with vitamin A so that it is about as potent as the year-round average for butter in this respect (9000 I.U. per pound). In addition, vitamin D, which is not present in butter, is often added to oleo.

Though the fats used in the two are different in origin, nutritionists are agreed that they are equally digestible; and the consensus is that the animal and vegetable fats found in oleo contain the fatty substances essential to good health at least to the same extent as does butterfat.

Flavor: After churning, oleo is flavored with a substance called "diacetyl", to give it a butter-like taste. This is the same substance which occurs naturally in butter.

There is a Federal tax of 10¢ a pound on colored oleomargarine. Many States prohibit the use of yellow coloring matter entirely; others tax colored oleo at a much higher rate than the white, uncolored product. For this reason, most oleo is sold white, and a capsule of harmless yellow coloring matter is included in the package, to be worked in at home.

Oleo has far better keeping qualities than butter. Some brands contain preservatives (up to 0.1% benzoic acid or benzoate of soda), but even those without preservatives were found, in CU's tests, to have no noticeable off-flavor after two months of ordinary refrigerator storage.

Quality: CU's chemical tests showed no marked differences among the 21 brands of oleo tested. All were up to standard for fat, moisture, free fatty acid and melting

22 OLEOMARGARINE

point. None of the brands were found to be short in weight. Most brands had added flavoring and preservative. Three of the brands tested contained a mixture of animal and vegetable fats; the remainder were made of vegetable fats only.

Prices varied from 17¢ to 28¢ a pound. Ratings are based on taste tests of unidentified samples by a large group of tasters. Since individual tastes do differ, CU suggests that you try first one of the cheaper brands in the "Very Good Flavor" group, and then, if necessary, change to another brand until you find one that suits the family's tastes.

From the *Reports*, April 1943.

OLEOMARGARINE

(Listings are in order of increasing price within each group)

VERY GOOD FLAVOR

Sweet Sixteen (Armour & Co.). 19¢ per lb. Animal and vegetable fats. Flavor added.

Golden Brand (Wilson & Co.). 22¢ per lb. Animal and vegetable fats.

Nucoa (Best Foods, Inc.). 25¢ per lb. Vegetable fat. Preservative and flavor added.

Good Luck (John F. Jelke Co.). 25¢ per lb. Vegetable fat. Flavor added.

Allsweet (Swift & Co.). 25¢ per lb. Vegetable fat. Preservative added.

Gem (Swift & Co.). 26¢ per lb. Vegetable fat. Preservative added.

Parkay (Kraft Cheese Co.). 27¢ per lb. Vegetable fat. Preservative and flavor added.

Creamo (The Blanton Co.). 27¢ per lb. Vegetable fat. Preservative and flavor added.

Richmade (Harrw-Taylor Co.). 28¢ per lb. Vegetable fat. Flavor added.

GOOD FLAVOR

Durkee's Dinner Bell (Durkee Famous Foods). 17¢ per lb. Vegetable fat. Preservative and flavor added.

Banner (Armour & Co.). 19¢ per lb. Animal and vegetable fats. Flavor added.

Daisy Maid (Swift & Co.). 19¢ per lb. Vegetable fat. Preservative added.

GOOD FLAVOR—CONT'D

Mrs. Filbert's All American (J. H. Filbert, Inc.). 26¢ per lb. Vegetable fat. Flavor added.
Elgin (B. S. Pearsall Butter Co.). 27¢ per lb. Vegetable fat. Flavor added.

FAIR FLAVOR

Nutley (Atlantic & Pacific Tea Co.). 17¢ per lb. Vegetable fat.
Marigold (Armour & Co.). 17¢ per lb. Vegetable fat. Flavor added.
Blue Bonnet (Southern States Foods, Inc.). 22¢ per lb. Vegetable fat. Preservative and flavor added.
Churngold (Churngold Corp.). 24¢ per lb. Vegetable fat. Preservative added.
Troco (Durkee Famous Foods). 25¢ per lb. Vegetable fat. Preservative and flavor added.
Dixie (Capitol City Products Co.). 25¢ per lb. Vegetable fat. Preservative and flavor added.
Durkee's (Durkee Famous Foods). 25¢ per lb. Vegetable fat. Preservative and flavor added.

BREAKFAST CEREALS

Enrichment of breakfast foods should contribute substantially to the nutritional welfare of many people—especially in areas where there is inadequate production of vegetables, a lack of consumer knowledge of nutrition or generally low income, necessitating a cheap, high-starch diet, and a major use of cereals.

But enriched cereals do not include all of the valuable nutritive elements that were lost when the grain was refined or processed. A diet of unrefined foods — meats, fruits, vegetables and whole grains — wisely chosen for vitamin and mineral content, would supply all essential food factors. No diet of enriched foods could do this.

Cereals are a fairly cheap source of calories. They contain 65% to 90% carbohydrates, and roughly 6% to 17% protein. Whole-grain cereals are the best buys since they contain phosphorus, iron and B vitamins in the germ and in the bran layer, plus, probably, other vitamins which have not yet been isolated, but which nevertheless make an important contribution to nutrition. Oatmeal ranks highest among the breakfast cereals in food-energy value (over 1800 calories per pound) and highest

(Continued page 30)

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Brand and Manufacturer or Distributor	Uncooked Wheat Cereals — Refined		
	Cost per package	Ounces per package	Amount of serving (table- spoons)
Asco Breakfast Farina (American Stores).....	6	15	2
Ann Page Mello-Wheat (A & P).....	14	28	0.3
Fort Dearborn Farina (National Tea Co.).....	14	28	0.3
Kroger's Wheat Gems (Kroger Groc.).....	13	28	0.3
White Spray Wheat Cereal (First National Stores).....	14	28	0.3
Pillsbury's Enriched Farina (Pillsbury Flour).....	9	14	0.4*
Co-op Farina (Eastern Co-op Wholesale).....	23	32	0.5
Regular Cream of Wheat.....	24	28	0.6
5-Minute Cream of Wheat.....	24	28	0.6*
Hecker's Cream Farina (Hecker Prod.).....	12	14	0.6*
Vita Wheat (Battle Creek Food Co.).....	25	20	0.8*

Uncooked Whole-Wheat Cereals — Unrefined	Cost per package	Ounces per package	Amount of serving (table- spoons)
Co-op Wheat Cereal (National Co-op).....	17	24	4
G.L.F. Rolled Wheat (Co-op G.L.F. Prod.).....	23	32	4
G.L.F. Milk Wheato (Co-op G.L.F. Prod.).....	23	32	4
Pettijohn's Rolled Wheat (Quaker Oats Co.).....	18	22	4
Wheatsworth Cereal (National Biscuit Co.).....	17	20	4
Grape-Nuts Wheat-Meal (Post Products).....	15	16	4
Ralston Wheat Cereal (Ralston Purina Co.).....	23	24	4
Wheatena (Wheatena Corp.).....	14	11	3
Stanton's Health Wheat (Health Wheat).....	25	20	4

Brand and Manufacturer or Distributor	Cost per package	Ounces per package	Amount of serving (table- spoons)	Cost per serving
Nature Maid Whole Wheat Cereal (Brownies Natural Food Stores)	21	15	4	1.4*
Minute Wheat (Minute Mills, Inc.).....	25	17	4	1.5
Instant Ralston* (Ralston Purina Co.).....	25	16	4	1.6*
Uncooked Oat Cereal				
Kroger's Rolled Oats (Kroger Groc.).....	17	48	4	0.3
White Spray Rolled Oats (First National).....	18	48	4	0.3
Gold-Seal Rolled Oats (Regular) (American Stores).....	9	20	4	0.3
Gold-Seal Rolled Oats (Quick Cooking).....	9	20	4	0.3
National 3-Minute Oats (National Oats Co.).....	10	20	4	0.3
Quaker Oats (Quaker Oats Co.).....	10	20	4	0.3
Sunnyfield Rolled Oats (A & P).....	8	20	4	0.3
Quick Quaker Oats (Quaker Oats Co.).....	10	20	4	0.3
Co-op Rolled Oats (National Co-op).....	11	20	4	0.4
H-O Quick Oats (Hecker Prod.).....	10	16	4	0.4
H-O Old-Fashioned Oats (Hecker Prod.).....	10	16	4	0.4
G.L.F. MilkOato (Co-op G.L.F. Prod.).....	23	32	4	0.5*
Uncooked Rice Cereal				
Cream of Rice (Cream of Rice Co.).....	18	18	2	.7
Miscellaneous Uncooked Cereals				
Maltex Cereal (Maltex Co.).....	22	22	2	1.0
Syl-Dex Breakfast Wheat (Loma Linda Food).....	33	23	2	1.1

Brand and Manufacturer or Distributor	Cost per package	Ounces per package	Amount of serving (table- spoons)	Cost per serving
Bragg Meal (Bragg Meal Co.).....	29	12	2	1.5
Dr. Jackson Meal (Dr. Jackson Foods).....	49	32	4	1.7
Dr. Fearn's Soy-o (Fearn Soya Foods).....	25	16	4	1.9
Mealene (V-Production Corp.).....	60	32	4	2.4

Processed Whole-Wheat Cereals

			(ounces)	
Co-op Wheat Flakes (National Co-op).....	10	8	1/2	0.6
Co-op Wheat Shreds (National Co-op).....	19	24	1	0.8
Muffets (Quaker Oats Co.).....	9	8	1†	0.9*
Fort Dearborn Wheat Flakes (National Tea).....	8	8	1	1.0
Sunnyfield Wheat Flakes (A & P).....	8	8	1	1.0
Nabisco Shredded Wheat (National Biscuit).....	13	12	1†	1.1
Shredded Ralston (Ralston Purina Co.).....	14	12	1	1.2
Kellogg's Pep (Kellogg Co.).....	13	10	1	1.3
Force (Hecker Products Corp.).....	11	8	1	1.4
Kellogg's Krumbles (Kellogg Co.).....	13	9	1	1.4
Ruskets (Loma Linda Foods).....	20	14	1	1.4*
Wheaties (General Mills).....	11	8	1	1.4*

Other Processed Wheat Cereals

Asco Wheat Puffs (American Stores Co.).....	9	8	1/2	0.6*
Sunnyfield Wheat Puffs (A & P).....	5	4	1/2	0.6
Co-op Toasted Wheat Puffs (National Co-op).....	7	4½	1/2	0.8

Brand and Manufacturer or Distributor	Cost per package	Ounces per package	Amount of serving (ounces)	Cost per serving
Kroger's Wheat Puffs (Kroger Groc.)	9	5	1/2	0.9
Kellogg's Wheat Krispies (Kellogg Co.)	10	8	1	1.3
Kroger's Wheat Flakes (Kroger Groc.)	11	8	1	1.4
Quaker Puffed Wheat Sparkies (Quaker Oats Co.)	11	4	1/2	1.4 ^u
 Processed Corn Cereals				
Sunnyfield Corn Flakes (A & P)	5	8	1	0.6
Asco Corn Flakes (American Stores Co.)	5	8	1	0.6
Kroger's Corn Flakes (Kroger Groc.)	8	11	1	0.7
Fort Dearborn Corn Flakes (National Tea Co.)	8	11	1	0.7
Co-op Corn Flakes (National Co-op)	9	11	1	0.8
Kellogg's Corn Flakes (Kellogg Co.)	5	6	1	0.8
Post Toasties Corn Flakes (General Foods)	5	6	1	0.8 ^v
 Processed Rice Cereals				
Comet Brown Rice Flakes (Comet Rice Co.)	5	6	1/2	0.4
Co-op Toasted Rice Puffs (Eastern Co-op Wholesale)	7	4	1/2	0.9
River Puffed Natural Brown Rice (Southern Rice)	8	4	1/2	1.0
Quaker Puffed Rice Sparkies (Quaker Oats Co.)	12	4 1/2	1/2	1.3 ^u
Heinz Rice Flakes (H. J. Heinz Co.)	10	6 1/2	1	1.5
Sunnyfield Rice Gems (A & P)	9	5 1/2	1	1.6
Kroger's Rice Doublets (Kroger Groc.)	10	5 1/2	1	1.8

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Brand and Manufacturer or Distributor	Cost per package	Ounces per package	Amount of serving (ounces)	Cost per serving
Kellogg's Rice Krispies (Kellogg Co.)	1.1	5 1/2	1	2.0
White Spray Rice Ruffles (First National Stores)	1.1	5 1/2	1	2.0

Part-Bran Cereals**

Kroger's Bran Flakes (Kroger Groc.)	1.0	15	1	0.7
Sunnyfield 40% Bran Flakes (A & P)	1.0	8	1	1.0
Co-op 40% Bran Flakes (National Co-op)	1.0	8	1	1.25
Post's 40% Bran Flakes (General Foods)	1.1	8	1	1.4
Bran & Fig Cereal (Battle Creek)	1.5	8	1	1.9

All-Bran Cereals***

Nabisco 100% Bran (National Biscuit Co.)	9	8	1	1.1
Kellogg's All-Bran (Kellogg Co.)	12	10	1	1.2

Miscellaneous Processed Cereals

Crackels (Quaker Oats)	9	7 1/2	1	1.2
Grape-Nuts (General Foods)	17	12	1	1.4 ^t
Zing Wheat Germ (Cream of Wheat)	23	14	1	1.6
Kix (General Mills)	12	7	1	1.7 ¹⁰
Kris-Bits (Loma Linda)	20	12	1	1.7 ¹⁰
Wheatasoy (Madison Foods)	15	9	1	1.7
soyapuffs (Penna. Soya Prod.)	29	8	1/2	1.8

Brand and Manufacturer or Distributor	Cost per package	Ounces per package	Amount of serving (ounces)	Cost per serving
Battle Creek "ZO" (Battle Creek).....	15	8	1	1.9 ¹⁴
Grape-Nuts Flakes (General Foods).....	14	7	1	2.0 ¹
Sunlets (American Dietails).....	25	11	1	2.3 ¹
Double B ₁ Wheat Germ with Fruits (American Dietails).....	49	16	1	3.0 ¹

¹Vitamins B₁, niacin (nicotinic acid) and iron added. ²Vitamins B₁, and niacin, calcium, phosphorus and iron added. ³Vitamin B₁, calcium, phosphorus and iron added. ⁴Wheat germ (vitamins B₁ and G), calcium, phosphorus, vitamins D and G (riboflavin) added. ⁵Wheat germ (vitamin B₁ and G) added. ⁶Wheat germ and dry skim milk (vitamins B₁ and G) and calcium and phosphorous added. ⁷Vitamin B₁ added. ⁸Wheat germ and rice polishings added. ⁹Vitamins B₁ and G added. ¹⁰Vitamins B₁ and D added. ¹¹Vitamins B₁, niacin and G, calcium, phosphorus and iron added. ¹²Vitamins A and D added. ¹³Vitamins A and D added.

¹⁴One biscuit.

^{*}Pre-cooked, add only water.

^{**}Desirability for general use as breakfast food doubtful because of high bran content.
^{***}Not desirable as a breakfast cereal.

30 CEREALS, CANNED BABY FOOD

in the proportion of proteins and fats. The other cereals all yield roughly 1600 calories per pound, with wheat next to oatmeal in percentage of protein, followed by cornmeal, and rice. Oatmeal and whole wheat are likewise richest in minerals. Uncooked whole grain cereals offer better value than processed or prepared cereals. But they are more time-consuming to prepare.

A word of warning about bran: Don't be taken in by the ads concerning its laxative effect. (see "Laxatives," page 175). Bran may have a place in the diet of cattle, but many doctors are agreed that it is not fit for human consumption. Instances of obstruction of the intestine by bran accumulations have been reported, as well as cases of "gastritis," and rectal disorders.

The accompanying tables list 95 well-known brands of cereal, cooked and uncooked.

CANNED BABY FOOD

Canned baby foods conveniently provide the variety of food textures and flavors needed to train an infant to good food habits. They are prepared with a minimum loss of important vitamins and minerals and are either homogenized or sieved (strained) to make them digestible for infants. Sieved or strained fruits and vegetables are forced through fine screens. Homogenized foods are more finely divided by being forced through stainless steel valves under very high pressure.

Special infant food is a convenience rather than an essential, however. The food prepared for the rest of the family can be strained and used to feed the baby. It is just as healthful as canned foods provided its nutritive value is preserved by proper cooking. Vegetables should be cooked in as little water as possible and not "cooked to death." Fifteen to 20 minutes cooking time is usually enough. Some of the water in which it is cooked should be mixed with the strained food. No seasoning should be used except a little salt on vegetables, a little sugar on fruits. Tomato juice can be made by straining canned tomatoes.

Whether special baby foods are more or less expensive than those used for the rest of the family is hard to say, with current prices of fresh fruits and vegetables fluctuating rapidly and both prices and ration values of can-

ned ones fluctuating. When fresh vegetables are in season, they may be the "Best Buys." Ordinary canned foods are economical as infant foods only if the price of a No. 2 can (1 lb. 3 or 4 oz.) is the same as or less than the following: green beans, 14¢; beets, 16¢; carrots, 15¢; peas, 15¢; spinach, 15¢; applesauce, 23¢. Otherwise prepared infant foods are lower priced. Relative point values of the two kinds must also be considered.

Consult your physician as to when to start feeding your child strained foods.

In CU's tests of 110 cans of baby food, including seven varieties of fruits and vegetables put up by four of the leading packers, no one brand proved consistently superior to the rest. Prices for each brand varied in different stores from 5¢ per can (sale price) to 10¢, with an average price of 7¢. Can size varied from 4½ ounces to 5 ounces; the Heinz products were the lowest in weight but also the least watery. Vitamin B₁ determinations indicated small variations between brands with no one brand consistently higher or lower than any other. No samples had off-flavors. Since the various foods are rich in different nutritive elements, CU recommends using a variety of them.

From the *Reports*, April 1943.

BAKED BEANS

There are three styles of baked beans: vegetarian—beans in tomato sauce without meat; beans in tomato sauce with pork; and New England or Boston Style—beans with pork, molasses, sugar, salt and spices.

Figures in parentheses represent cost per pound, based on the per can price.

From the *Reports*, January 1943.

NEW ENGLAND STYLE

BEST BUYS

Friend's (Friend Bros., Melrose, Mass.). 1 lb. 12 oz. can, 17¢ (10¢). 1 lb. can, 10¢. Flavor excellent, consistency very variable.

Puritan (Maine Canned Foods, Portland, Me.). 1 lb. 12 oz. "bean pot" jar, 19¢ (11¢). Flavor and consistency excellent.

Trupak (Haas Bros., San Francisco). 1 lb. 12 oz. can, 21¢ (12¢). Flavor and consistency excellent.

(Continued next page)

ACCEPTABLE*(In estimated order of quality)***Trupak** (see "Best Buys.").**B & M** (Burnham and Morrill Co., Portland, Me.). 1 lb. 12 oz. "bean pot" jar, 21¢ (12¢); 1 lb. 3 oz. jar, 19¢ (16¢). Flavor and consistency excellent.**Puritan** (see "Best Buys.").**Co-op** (National Co-operatives, Inc., Chicago). 1 lb. 3 oz. jar, 15¢ (12¢). Flavor good, consistency excellent.**Friend's** (see "Best Buys.").**Red and White** (Red and White Stores). 1 lb. 3 oz. jar, 19¢ (16¢); 1 lb. 12 oz. can, 19¢ (11¢). Flavor and consistency good.**Monmouth** (Monmouth Canning Co., Portland, Me.). 1 lb. 3 oz. jar, 13¢ (11¢). Flavor good, consistency variable.**Reid Murdoch** (Reid, Murdoch and Co., Chicago). 1 lb. 3 oz. jar, 19¢ (16¢). Flavor fair, consistency variable.**Heinz** (H. J. Heinz Co., Pittsburgh). 1 lb. 2 oz. can, 15¢ (13¢). Flavor fair, consistency good.**TOMATO SAUCE AND PORK****BEST BUYS****Blue and White** (Red and White Stores). 1 lb. 13 oz. can, 15¢ (8¢). Flavor excellent, consistency good.**Dodge** (Haas Bros., San Francisco). 1 lb. 14 oz. can, 15¢ (8¢). Flavor and consistency good.**Brimfull** (Kitchen Products, Chicago). 1 lb. 12 oz. can, 12¢ (7¢). Flavor good, consistency variable.**Co-op Grade A** (National Co-operatives, Inc., Chicago). 1 lb. can, 7¢; 1 lb. 14 oz. can, 14¢ (7¢). Flavor good, beans somewhat hard, consistency variable.**ACCEPTABLE***(In estimated order of quality)***Blue and White** (see "Best Buys.").**Dodge** (see "Best Buys.").**Brimfull** (see "Best Buys.").**Co-op Grade A** (see "Best Buys.").**Hurff** (Edgar F. Hurff Co., Swedesboro, N. J.). 1 lb. jar, 13¢. Flavor good, consistency excellent.**Van Camp's** (Van Camp's, Inc., Indianapolis). 1 lb. can, 10¢; 1 lb. 6 oz. can, 12¢ (8¢). Flavor good, consistency variable.

Armour's Star (Armour and Co., Chicago). 1 lb. 15 oz. can, 16¢ (8¢). Flavor fair, consistency very variable.

Heinz (H. J. Heinz Co., Pittsburgh). 12 oz. can, 10¢ (13¢); 1 lb. 2 oz. can, 15¢ (13¢). Flavor good, consistency variable.

Phillips (Phillips Packing Co., Cambridge, Md.). 1 lb. can, 8¢. Flavor good, consistency fair.

Swift's (Swift and Co., Chicago). 1 lb. 12 oz. can, 16¢ (9¢). Flavor fair, hard beans, consistency fair.

Old English (Sunnyvale Packing Co., San Francisco). 1 lb. can, 8¢. Flavor and consistency fair.

Ritter (P. J. Ritter Co., Bridgeton, N. J.). 1 lb. 7 oz. can, 13¢ (9¢). Flavor and consistency good. Contained many broken beans and a large amount of peel.

VEGETARIAN

ACCEPTABLE

(*In estimated order of quality*)

Heinz (H. J. Heinz Co., Pittsburgh). 1 lb. 1½ oz. jar, 14¢; 1 lb. 2 oz. can 15¢ (13¢). Flavor good, consistency variable.

Hurff (Edgar F. Hurff Co., Swedesboro, N. J.). 1 lb. can, 13¢. Flavor fair, consistency poor.

CANNED CORN

Corn is cheap, good and filling food. It contains generous amounts of fat, protein and carbohydrate. Yellow corn is rich in vitamin A, and both yellow and white corn contain some B vitamins.

Canners are setting aside a large part of this year's pack (all of this from better grades) for government purchase.

Most corn is canned either as whole kernel or cream style. Whole kernels are cut as close to the cob as possible and are packed in a sweetened brine.

Cream style is more widely used. For this type, part of each kernel is cut from the cob and the remainder scraped off by blunt knives. The "scrapings" are mixed with the kernels. Water, salt and sugar are added, the amount varying with the maturity of the corn and the consistency desired. A heavy, creamlike consistency is best. If the consistency is too loose, too much water has been used;

if too stiff, the corn is old and starchy. Starch is sometimes added to prevent separation of water, particularly with very young and tender corn. But too much starch affects the flavor.

Most canned corn is yellow, but some white corn is packed. White corn tends to be more tender, yellow corn more flavorful.

CU tested only cream style corn — two to six samples of each of 33 brands of yellow corn and 12 brands of white (a total of 158 cans) — for flavor, maturity, consistency and general appearance. Ratings are based on these factors. Unless otherwise noted, prices are the average paid for No. 2 (1 lb., 4 oz.) cans.

From the Reports, November, 1942.

YELLOW CORN

The following brands of yellow corn were considered to offer the best value for the money in the order given.

BEST BUYS

- Phillips** (Phillips Packing Co.). 11¢. Excellent flavor and color; variable consistency.
- Bohack's Fancy** (H. C. Bohack Co.). 12¢. Excellent flavor and color; fair consistency.
- Ecco** (Economy Grocery Stores). 13¢. Excellent flavor; good color; variable consistency.
- Much-More** (Food Products Co. of America). 1 lb., 3 oz., 13¢. Good flavor and color; variable consistency.
- Rialto** (Grand Union Co.). 12¢. Good flavor and color; very variable consistency.

ACCEPTABLE

(In order of quality without regard to price.)

- Red & White** (Red & White Corp.). 15¢. Excellent flavor, consistency and color.
- Monarch** (Reid, Murdock & Co.). 17¢. Excellent flavor and consistency; good color.
- Del Monte** (California Packing Corp.). 12¢. 1 lb., 1 oz. can. Excellent flavor and color; variable consistency.
- I G A** (Independent Grocers' Alliance). 16¢; 11 oz. can, 11¢. Excellent flavor; good color; variable consistency.
- Libby's** (Libby, McNeill & Libby). 15¢. Excellent flavor and color; fair consistency.
- Nation-Wide** (Nation-Wide Service Grocers). 15¢. Excellent flavor; good consistency; variable color.

ACCEPTABLE—CONT'D

Phillips (see "Best Buys").

Ecco (see "Best Buys").

Bohack's Fancy (see "Best Buys").

White Rose (Seeman Bros.). 1 lb. can, 15¢; 11 oz. can, 10¢. Good flavor; excellent color; variable consistency.

Kroger's Country Club (Kroger Grocery & Baking Co.). 13¢. Good flavor; excellent color; good consistency.

Stokely's Finest (Stokely Bros.). 1 lb. 1 oz. can, 15¢. Variable flavor; good color; excellent consistency.

Dodge (Haas Bros.). 13¢. Variable flavor; good color; excellent consistency.

Kroger's Avondale (Kroger Grocery & Baking Co.). 11¢. Excellent flavor; fair color and consistency.

Much-More (see "Best Buys").

S and W (S and W Fine Foods, Inc.). 16¢. Good flavor; variable color; good consistency.

Rialto (see "Best Buys").

Lily of the Valley (Snider Packing Corp.). 14¢; No. 303 (1 lb.), 13¢. Variable flavor; excellent color and consistency.

Co-op Red Label (National Co-operatives, Inc.). 13¢. Good flavor, color and consistency.

Freshpak (Grand Union Co.). 15¢. Variable flavor; good color and consistency.

Krasdale (A. Krasne, Inc.). 14¢; No. 303 (1 lb.), 12¢. Good flavor; excellent consistency; variable color.

Royal Scarlet (R. C. Williams & Co.). 16¢. Good flavor; variable color and consistency.

Finast (First National Stores). 13¢. Good flavor and color; fair consistency.

Snider's (Snider Packing Corp.). 15¢; No. 303 (1 lb.), 11¢. Good flavor and consistency; extremely variable color.

Yacht Club (Reid, Murdoch & Co.). 16¢. Variable flavor; good color and consistency.

Shurfine (National Retailer-Owned Grocers, Inc.). 15¢. Good flavor and color; very poor consistency.

Del Maiz (Minnesota Valley Canning Co.). 13¢. Variable flavor; extremely variable color; excellent consistency.

A & P (A & P). 12¢. Fair flavor; good color; variable consistency.

Iona (A & P). 12¢. Fair flavor; variable color; fair consistency.

(Continued next page)

ACCEPTABLE—CONT'D

Premier (Francis Leggett & Co.). 13.5¢; No. 303 (1 lb.), 12¢. Variable flavor and color; very variable consistency.

Hart (W. R. Roach & Co.). 14¢. Fair flavor and color; very poor consistency.

Co-op Blue Label (National Co-operatives, Inc.). 12¢. Very variable flavor; fair color; extremely stiff consistency.

NOT ACCEPTABLE

American Home (National Tea Co.). 15¢. Very variable flavor; poor color; fair consistency. Flavor indicative of overheating. Since CU can not determine how widespread are the results of faulty processing, it is safer to buy an "Acceptable" brand.

WHITE CORN

The following brands of white corn were considered to offer the best value for the money in the order given.

BEST BUYS

Kroger's Avondale (Kroger Grocery & Baking Co.). 10¢. Good flavor; excellent color and consistency.

Island Manor (H. C. Bohack Co., Inc.). 11¢. Variable flavor and consistency; good color.

Ideal (Wilkinson, Gaddis & Co.). 13¢. Excellent flavor and consistency; good color.

Country Home (General Food Products Co.). 12¢. Good flavor, color and consistency.

ACCEPTABLE

(In order of quality without regard to price.)

Ideal (see "Best Buys").

Clover Farm (Clover Farm Stores). 17¢. Excellent flavor and consistency; good color.

Island Manor (see "Best Buys").

Richelieu (Sprague, Warner & Co.). 15¢. Excellent flavor; good color; stiff consistency.

Kroger's Avondale (see "Best Buys").

Country Home (see "Best Buys").

Glendale (Clover Farm Stores Corp.). 15¢. Good flavor and color; very variable consistency.

Phillips (Phillips Packing Co.). 15¢. Fair flavor; variable color; poor consistency.

ACCEPTABLE—CONT'D

American Home (National Tea Company). 15¢. Good flavor; variable color; good consistency.

Trupak (Haas Bros.). No. 303 (1 lb., 1 oz.), 12¢. Poor flavor; good color; excellent consistency.

Gardenside (Table Products Co.). 10¢. Variable flavor and color; extremely loose consistency.

NOT ACCEPTABLE

Much-More (Food Products Co. of America). 13¢. Poor flavor; fair color; consistency variable from very stiff to very fluid.

CANNED GRAPEFRUIT JUICE

Grapefruit juice is an excellent source of vitamin C and is also rich in vitamin B₁. Canned juice of good quality should not have the bitter taste of unripe fruit or peel oil. If it has been handled properly during the canning process, the juice will be free from extraneous material, such as seeds, pulp, "rag" from the inner surface of the peel and other similar substances.

Approximately four samples each of 24 brands of grapefruit juice were tested for flavor, color, presence of extraneous material and vitamin C content. Unless otherwise noted in the ratings, about 40 milligrams of vitamin C were present in four ounces (an average serving) of grapefruit juice. Prices were noted in terms of cost per four ounce serving. In any brand, the larger the can, the lower the cost per serving. The number of can sizes currently available is limited by order of the WPB.

Prices in the ratings below are for an 18 oz. (No. 2) can unless otherwise stated. "Serving" is equivalent to 4 oz.

From the *Reports*, November 1942.

BEST BUYS

The following brands were considered to offer the best value for the money in the order given.

Co-op Red Label (National Co-operatives, Inc.). 11¢.
Cost per serving, 2.3¢. Flavor excellent

White Rose (Seeman Bros.). 10¢. Cost per serving, 2.2¢.
Flavor excellent.

Finast—Fancy (First National Stores). 10¢. Cost per serving, 2.2¢. Flavor good.

(Continued next page)

ACCEPTABLE*(In approximate order of quality)*

Premier (Francis H. Leggett). 12 oz. can, 9¢. Cost per serving, 3¢. Flavor excellent. High vitamin C content.

Co-op Red Label (see "Best Buys").

Finast—Fancy (see "Best Buys").

Ecco (Economy Grocery Stores). 12¢. Cost per serving, 2.7¢. Flavor excellent.

White Rose (see "Best Buys").

I G A (Independent Grocers Alliance Distributing Co.). 12¢. Cost per serving, 2.7¢. Flavor excellent.

Glenwood—Fancy (American Stores). 11¢. Cost per serving, 2.4¢. Flavor excellent.

Red and White (Red and White Corp.). 12¢. Cost per serving, 2.6¢. Flavor good.

Del Monte (Calit. Packing Corp.). 11¢; 12 oz. can, 8¢. Cost per serving, 2.4¢ and 2.7¢. Flavor good.

Royal Scarlet (R. C. Williams and Co.). 14¢. Cost per serving, 3.1¢. Flavor excellent; quality variable.

Texsun (Rio Grande Valley Citrus Exchange). 12 oz. can, 8¢. Cost per serving, 2.7¢. Flavor good.

Trupak (Haas Bros.). 11¢; 12 oz. can, 8¢. Cost per serving, 2.4¢ and 2.7¢. Flavor fair. Vitamin C content variable, but high.

Polk's (Polk Co.). 10¢. Cost per serving, 2.2¢. Flavor good.

Seald-Sweet (Florida Citrus Exchange). 10¢. Cost per serving, 2.2¢. Flavor fair; 12 oz. cans had somewhat unripe flavor.

Dr. Phillips—Fancy Grade A (Dr. P. Phillips Co.). 13¢; 13½ oz. can, 10¢. Cost per serving, 2.9¢. Flavor good.

Libby's (Libby, McNeill and Libby). 13¢; 13½ oz. can, 10¢. Cost per serving, 2.9¢. Flavor good.

Stokely's (Stokely Bros. and Co.). 14¢. Cost per serving, 3.1¢. Flavor variable.

A & P—Grade A (A & P). 10¢. Cost per serving, 2.2¢. Flavor good.

Dellford (Middendorf and Rohrs). 15¢. Cost per serving, 3.3¢. Flavor good. High vitamin C content.

Krasdale (A. Krasne, Inc.). 11¢. Cost per serving, 2.5¢. Flavor quite variable.

White Ribbon (Krenning-Schlapp Grocery Co.). 15¢. 46 oz. can, 25¢. Cost per serving, 3.3¢ and 2.2¢. Flavor excellent.

ACCEPTABLE—CONT'D

S and W (S and W Fine Foods). 13¢ 12 oz. can, 10¢. Cost per serving, 2.9¢ and 3.3¢. Flavor good. Vitamin C content variable, low in 2 cans.

Dromedary (Hills Bros. Co.). 10¢. Cost per serving, 2.2¢. Flavor fair.

Gerbro (Gerber Bros.). 13¢. Cost per serving, 2.8¢. Flavor good; dark color; quality variable.

NOT ACCEPTABLE

Monarch (Reid, Murdoch and Co.). 14¢. Cost per serving, 3¢. Flavor good. One can contained a fly.

CANNED GREEN BEANS

Green beans are valuable food—rich in vitamins A and G (riboflavin)—fair sources of vitamins B₁, C and niacin and good sources of many essential minerals. But to get full value from a can of green beans you must use the liquor as well as the beans, since some of the nutritive elements are dissolved in the liquor. Use it as a base for soups or gravies or chill it for a "vegetable cocktail."

All brands of canned green beans cost the same number of ration points for the same size can. But of the 48 brands tested by CU, the price of a No. 2 can varied from 12¢ to 29¢. Though quality varied as much, the tests revealed no relationship between high price and good quality. The cheapest brands were low in quality.

These factors determine the quality of a can of string beans: Beans should be picked when they are young and tender. Old beans tend to be tough and stringy, flat in flavor and marred by rust spots and worm holes. They should be canned as soon after picking as possible to avoid loss of important vitamins and impairment of flavor. Cooking time and temperature during canning must be carefully controlled.

The beans should be inspected meticulously. Defects such as brown spots or other blemishes, split pods, loose or unsnipped ends, extraneous material like stems or leaves are signs of careless handling at the cannery.

The packing liquor should be clear, almost colorless. Cloudiness, sediment or reddish color are undesirable.

Color, size and flavor of the beans should be uniform.

(Continued next page)

The ratings below are in order of quality based on the above-mentioned factors. "Fill of container" and "drained weight" (weight of beans without liquor) were also checked. None of the cans examined was slack-filled, but three cans of *Finast* and one can of *Richelieu* were below government specifications for drained weight.

From the *Reports*, May 1943.

BEST BUYS

(Figure in parentheses is cost per lb. of beans without packing liquor—drained weight.)

Co-op, Grade A (National Co-operatives, Inc.). 19¢ (24¢).

Cut. Nationally available in cooperative stores.

Dellford (Middendorf and Rohrs). 20¢ (26¢). Cut. Available in the New York metropolitan area.

Kuner (Kuner-Empson Co.). 17¢ (22¢). Cut. Available in the Middle West.

Bohack's Fancy (H. C. Bohack Co., Inc.). 18¢ (22¢).

Cut. Available in Bohack stores in Brooklyn and Long Island.

ACCEPTABLE

(In order of quality. Figure in parentheses is cost per lb. of beans without packing liquor—drained weight.)

Premier. 23¢ (31¢). Whole. Available east of the Mississippi.

Del Monte. 23¢ (31¢). Whole. Available nationally.

S and W. 24¢ (31¢). Whole. Available nationally.

Dellford (see "Best Buys").

Co-op Grade A (see "Best Buys").

Kroger's Country Club. 23¢ (28¢). Whole. Available nationally in Kroger Stores.

Snider. 25¢ (31¢). Whole. Available nationally.

Red and White. 21¢ (27¢). Asparagus style. Available nationally.

Kuner (see "Best Buys").

Bohack's Fancy (see "Best Buys").

A & P, Grade A. 23¢ (29¢). Small whole. Available nationally in A & P stores.

S. S. Pierce. 22¢ (26¢). Cut. Quality variable. Available in New England.

Royal Scarlet. 23¢ (31¢). Cut. Quality variable. Available in the East.

Clover Farm. 27¢ (35¢). Whole. Available nationally in Clover Farm stores.

ACCEPTABLE—CONT'D

Finast. 23¢ (33¢). Whole. Below government specifications for drained weight. Available in New England and a few other areas in First National stores.

Asco, Fancy. 25¢ (33¢). Whole. Available in stores connected with American Stores Co.

Yellowstone. 17¢ (24¢). Cut. Available in Midwest.

Krasdale. 20¢ (25¢). Cut. Many loose ends. Available in the New York metropolitan area.

Red and White. 19¢ (25¢). Cut. Available nationally.

Monarch. 22½¢ (26¢). Cut. Quality variable. Two cans very good and 1 can poor. Available nationally.

Hart. 18¢ (23¢). Cut. Many loose ends. Packing liquor somewhat cloudy. Available nationally.

White Rose. 27¢ (36¢). Whole. Available nationally.

Yacht Club. 20¢ (25¢). Cut. Available nationally.

Richelieu. 29¢ (40¢). Whole. One can below government specifications for drained weight. Available nationally.

Bohack's Best. 18¢ (24¢). Cut. Available in Bohack stores in Brooklyn and Long Island.

White Rose. 21¢ (27¢). Cut. Available nationally.

Del Monte. 21¢ (26¢). Cut. Stringy. Available nationally.

Cherry Valley. 13½¢ (18¢). Cut. Available in Jewel stores and on Jewel auto routes.

Snider. 15 oz. glass jar, 17½¢ (27¢). Cut. Available nationally.

Shurfine. 19¢ (24¢). Cut. Available nationally.

Ecco (Economy Grocery Stores). 18¢ (22¢). Cut. Quality variable. Tough.

Kroger's Avondale (Kroger Grocery and Baking Co.). 14¢ (18¢). Cut. Quality variable. One can "Not Acceptable"—flat, sour flavor, stringy, packing liquor cloudy and reddish.

IGA (Independent Grocers' Alliance Distributing Co.). 19¢ (24¢). Cut. Quality variable. One can below government specifications for drained weight.

Premier (Francis H. Leggett and Co.) 21¢ (27¢). Cut. Many defective pieces, leaf, stem, etc.

Jack Sprat (Jack Sprat Foods, Inc.). 18¢ (22¢). Cut. Quality variable.

Reliable (A & P) 17¢ (23¢). Cut. Tough.

Much-More (Food Products Co.). 13¢ (17¢). Cut. Loose.

(Continued next page)

ACCEPTABLE—CONT'D

seeds, ends; packing liquor cloudy.
Grand Union (Grand Union Co.). 19¢ (24¢). Cut.
Choptank (Phillips Sales Co.). 14¢ (18¢). Cut. Quality variable. Many loose seeds and ends, pieces of leaf. Tough.
Island Manor (H. C. Bohack Co.). 15¢ (19¢). Cut. Quality variable. Many loose seeds and ends. Tough.
Glendale (Clover Farm Stores). 15¢ (19¢). Cut. Quality variable. Packing liquor cloudy. Tough.
Gibbs (Gibbs and Co.). 13¢ (17¢). Cut. Many loose seeds, ends and pieces of leaf. Packing liquor cloudy. Tough.
Iona (A & P). 12¢ (15¢). Cut. Quality variable. Many loose seeds and ends. Packing liquor cloudy. Stringy.

NOT ACCEPTABLE

Kroger's Big K (Kroger Grocery and Baking Co.). 13¢ (18¢). Cut. Quality variable. Flat, sour taste, tough and stringy. Packing liquor cloudy and reddish.
Phillips (Phillips Packing Co.). 15¢ (18¢). Cut. Quality variable, but very low. Many loose seeds and ends. Packing liquor cloudy and pink.
Stokely's Finest (Stokely Bros. & Co.). 19¢ (25¢). Cut. Off-flavor. Tough. One can contained a caterpillar.
Sultana (A & P). 20¢ (25¢). Whole. Off-flavor. Many defective pieces.

CANNED PEACHES

Peaches are a rich source of vitamin A and the B complex vitamins. Canned peaches face no tin restrictions, but a considerable portion of the 1943 pack is scheduled to go to the armed forces.

Unripe or rotted canned peaches are seldom found. Firmness of the peaches varies widely in different brands, but tastes differ as widely; some persons prefer soft peaches, others prefer them firm. Remember, though, that where peaches are packed very ripe and soft there may occasionally be an over-ripe section that does not retain its shape; at the opposite extreme there may be an occasional hard section.

Density of the syrup affects the sweetness of the product; with more concentrated syrups more sugar is absorbed into the fruit. Peaches are packed in light (9-15% sugar), medium (14-19% sugar), heavy (19-25% sugar) or extra heavy (25-35% sugar) syrup; in general, the

label states the density accurately. Light syrup is rarely used in can sizes sold at retail. Heavy and extra heavy syrups help preserve the shape of the fruit, but many persons object to the extreme sweetness of such packs. There is no prohibition against heavy syrups in commercial canning, but no canner may use more than 80% of the cane or beet sugar he used in 1941.

The greater part of the peach pack is the yellow clingstone variety, though in recent years increasing amounts of freestones have been canned. Clingstones are smooth and sleek—to some people, objectionably slippery. Free-stones are naturally ragged, with a distinctive, clean, fresh flavor. Certain varieties have a peach pit flavor fancied by some people.

CU found considerable variation in the drained weight of the peaches examined. Therefore, price per drained pound was used to determine "Best Buys," and the fill of the cans was noted in the ratings. Well filled cans contain approximately 10% more fruit by weight than average; poorly filled cans about 10% less than average; for a No. 2½ can this amounts to a 2¢ increase or decrease in the actual cost of the fruit.

Ratings are in order of firmness. If you like a soft peach, choose a brand near the top of the list; for a firm peach, select one near the bottom. Comments are based on examination for firmness, color, uniformity, appearance, absence of defects and syrup density.

From the *Reports*, October 1942.

CLINGSTONE

Price is per No. 2½ can (1 lb., 13 oz. or 1 lb., 14 oz.) unless otherwise stated. A No. 303 can contains 1 lb. or 1 lb., 1 oz.

BEST BUYS

The following brands were considered to offer the best value for the money, on the basis of both quality and price. Island Manor (H. C. Bohack Co.). 20¢. Slices or halves in medium syrup. Well-filled can; uniform size and firmness.

A&P (A&P). 20¢. Slices in heavy syrup. Well-filled can; excellent color; variable firmness; uniform size.

Castle Crest (Table Products Co.). 18¢. Slices or halves in heavy syrup. Well-filled can; excellent color; uniform size; large size halves; variable firmness.

(Continued next page)

BEST BUYS—CONT'D

Richmond (First National Stores). 21¢. Slices in medium syrup. Well-filled can; occasional scab blemishes, variable size and firmness.

Rob-Ford (American Stores). 19¢. Slices or halves; labeled light syrup. Well-filled can; uniform size and firmness. Syrup tested medium.

Del Monte (California Packing Corp.). 20¢. Slices in heavy syrup. Well-filled can; excellent color; variable size and firmness.

Iona (A&P). 18¢. Slices in medium syrup. Poorly filled can; variable size and color; variable firmness.

ACCEPTABLE

The following brands are listed in the order of average tenderness, as determined by tests for firmness, starting with the softest. Uniformity and general quality are noted. "Fill" is based on drained weight of fruit.

Island Manor (see "Best Buys").

White Rose (Seeman Bros.). 25¢. Slices in heavy syrup. Average fill; excellent color; uniform size and firmness.

Ecco (Economy Grocery Stores). 24¢. Slices in heavy syrup. Poorly filled can; excellent color; uniform size and firmness.

Clover Farm (Clover Farm Stores). 29¢. Halves in heavy syrup. Well-filled can; excellent color; uniform size and firmness.

Rob-Ford (see "Best Buys").

Freshpak (Grand Union Co.). 20¢. Halves in medium syrup. Well-filled can; occasional overripe halves; uniform size; variable firmness.

Rosedale (Libby, McNeill & Libby). 22¢. No. 303 can, 14¢. Halves in medium syrup. Average fill; occasional overripe halves; uniform size; variable firmness.

Richmond (see "Best Buys").

S & W (S & W Inc.). 33¢. No. 303 can, 20¢. Slices or halves; labeled extra heavy syrup. Average fill; excellent color; occasional overripe halves; uniform size; syrup tested from heavy to extra heavy; somewhat variable firmness.

Dellford (Middendorf & Rohrs). 27¢. Slices in heavy syrup. Well-filled can; excellent color; uniform size and uniform firmness.

ACCEPTABLE—CONT'D

Co-op Red Label (National Co-operatives, Inc.). 25¢. Slices or halves; labeled heavy syrup. Average fill; occasional overripe halves; uniform size; excellent flavor; syrup tested from medium to heavy; somewhat variable firmness.

Finast (First National Stores). 21¢. Slices; labeled heavy syrup. Substandard fill; excellent color, uniform size and firmness. Syrup tested extra heavy.

Nation-Wide (Nation-Wide Service Grocers). 29¢. Slices or halves in heavy syrup. Well-filled can; uniform size and firmness.

I G A (Independent Grocers' Alliance). 27¢; No. 1 tall can (15 oz.), 19¢. Slices; labeled heavy syrup. Poorly filled can; occasional overripe pieces, scab blemishes and pieces of peach stone; syrup tested from medium to extra heavy; somewhat variable firmness; uniform size.

Val Vita (Val Vita Food Products, Inc.). 18¢. Halves in medium syrup. Average fill; size and appearance of halves varied from can to can; somewhat variable firmness.

Trupak (Haas Bros.). No. 303 can, 17¢. Slices; labeled heavy syrup. Well-filled can; uniform size and firmness; syrup tested from heavy to extra heavy.

Blue & White (Red & White Corp.). 27¢. Halves or slices in medium syrup. Well-filled can; uniform size and firmness; size of halves varied from can to can.

Iona (see "Best Buys").

Stokely's (Stokely Bros. & Co., Indianapolis). 23¢; No. 303 can, 17¢. Halves or slices in heavy syrup. Average fill; uniform size and firmness.

American Home (National Tea Co.). 21¢. Slices in heavy syrup. Average fill; uniform size and firmness; occasional scab blemishes and pieces of stone.

Much More (Food Products Co. of America). 20¢. Halves in medium syrup. Average fill; occasional overripe halves; uniform size; variable firmness.

Libby's (Libby, McNeill & Libby). 24¢. Slices or halves; labeled heavy syrup. Poorly filled can; uniform size and firmness; large halves; syrup tested from medium to heavy.

Royal Scarlet (R. C. Williams & Co.). No. 303 can, 18¢.

(Continued next page)

ACCEPTABLE—CONT'D

Slices or halves; labeled heavy syrup. Well-filled can; uniform size and firmness; syrup heavy to extra heavy.

Kroger's Country Club (Kroger Grocery & Baking Co.). 22¢. Slices in heavy syrup. Average fill; uniform size and firmness.

Red & White (Red & White Corp.). 30¢. Halves in heavy syrup. Average fill; size varied from can to can; somewhat variable firmness.

Del Monte (see "Best Buys").

Castle Crest (see "Best Buys").

Dodge (Haas Bros.). 22¢. Slices in heavy syrup. Poorly-filled can; excellent color; uniform firmness and size.

A&P (see "Best Buys").

Asco (American Stores Co.). 23¢. Slices in heavy syrup. Well-filled can; excellent color and flavor; variable firmness; uniform size.

Glendale (Clover Farm Stores). 25¢. Slices; labeled medium syrup. Well-filled can; excellent color; variable firmness; uniform size; skin and scab blemishes present; syrup tested from medium to heavy.

Kroger's Avondale (Kroger Grocery & Baking Co.). 20¢. Slices in medium syrup. Poorly filled can; uniform firmness; variable size.

Sun Glory (Economy Grocery Stores). 19¢. Slices in medium syrup. Poorly filled can; uniform firmness; variable color and size.

Premier (Francis H. Leggett & Co.). 30¢. Slices or halves in heavy syrup. Average fill; uniform size and firmness.

Bohack's (H. C. Bohack Co.). 20¢. Slices; labeled heavy syrup. Poorly filled can; uniform size and firmness; syrup tested from medium to extra heavy.

FREESTONE

Price is for No. 2½ can unless otherwise noted.

BEST BUYS

The following brands were considered to offer the best value for the money, on the basis of both quality and price.

Ideal (American Stores Co.). 23¢. Halves in extra heavy syrup. Poorly filled can; excellent color; uniform size and firmness; peach pit flavor.

Iona (A&P). No. 303 can, 13¢. Slices in medium syrup. Well-filled can; variable size and firmness.

ACCEPTABLE

The following brands are listed in order of average tenderness, as determined by tests for firmness.

Ideal (see "Best Buys").

Monarch (Reid, Murdoch & Co.). 34¢. Slices or halves; labeled extra heavy syrup. Average fill; excellent color; uniform size; occasional overripe pieces; peach pit flavor; syrup tested from medium to extra heavy; somewhat variable firmness.

Asco (American Stores). 17¢. Halves in heavy syrup. Substandard fill; uniform firmness; variable size; strong peach pit flavor.

Shurfine (National Retailer-Owned Grocers). 26¢. Slices in extra heavy syrup. Poorly filled can; excellent color; uniform size and firmness.

Co-op Red Label (National Co-operatives, Inc.). 25¢. Halves; labeled heavy syrup. Average fill; excellent color; uniform firmness; size of halves varied from can to can; syrup tested from medium to heavy; peach pit flavor.

S & W (S & W Inc.). No. 303 can, 20¢. Slices; labeled heavy syrup. Well-filled can; excellent color; uniform size and firmness; syrup tested heavy to extra heavy.

Iona (see "Best Buys").

Much More (Food Products Co. of America). 22¢. Halves, labeled medium syrup. Well-filled can; uniform size and firmness, syrup tested from medium to heavy.

Co-op (National Co-operatives, Inc.). 20¢. Halves in medium syrup. Average fill; excellent color; uniform size and firmness. One can was found to be overcooked; resulting in a stewed flavor.

NOT ACCEPTABLE

Royal Scarlet (R. C. Williams & Co.). 27¢. Halves in heavy syrup. Poorly filled can; uniform size and firmness. All cans examined were overcooked resulting in a stewed flavor and extreme darkening of the fruit.

CANNED PEARS

CU's test of canned pears showed a variation in the cost per pound of the drained fruit of from 20¢ to 38¢. Canned pears were judged by their texture, firmness,

48 PEARS

uniformity of color and size, and appearance. Inferior flavor is rarely found in pears ranking high in these respects. Given good fruit as a start, the final quality of the canned product is determined largely by the way in which it is handled in the cannery. Pears are generally picked while still green, since they develop better flavor and texture when they are allowed to ripen off the tree. Storage for the right length of time, at proper temperatures, is essential to proper ripening. Care in sorting; trimming, peeling and coring is also important.

Different brands of pears varied greatly in sweetness, depending largely on the syrups in which they were packed. The syrup may be "Extra Heavy" (22% or more sugar), "Heavy" (18-22%), "Medium" (14-18%), or "Light" (10-14%). The heavier the syrup, the more sugar the fruit absorbs and the sweeter it is.

CU tested 85 cans of pears, with two to four samples of each of 24 brands. None of the brands tested had off-flavors. Pears which were gritty, stringy, mushy or hard were considered inferior. Other factors examined were evidences of bruises, careless peeling and coring; color; uniformity of size and shape; syrup density; and "fill"—the number of pieces and the drained weight.

The prices given are for a No. 2½ (1 lb. 13 oz.) can, unless otherwise indicated. Prices in parentheses are the cost of 1 lb. of fruit, without syrup.

"Best Buys" were based on cost per pound, drained.
From the *Reports*, March 1943.

BEST BUYS

The following pears were considered to offer the best value for the money.

Bohack's (H. C. Bohack Co.). 23¢ (21¢). Heavy syrup.
S and W (S and W Inc.). 35¢ (28¢). Extra heavy syrup.
Dellford (Middendorf and Rohrs). 29¢ (27¢). Heavy syrup. Size not uniform.

Del Monte (Calif. Packing Corp.). 27¢ (24¢). Labeled heavy syrup but tested medium. Firmness varied from can to can; size not uniform.

ACCEPTABLE

The following are in estimated order of quality.
Bohack's (see "Best Buys").

Premier (Francis H. Leggett and Co., NYC). 33¢ (30¢). Heavy syrup.

ACCEPTABLE—CONT'D

S and W (see "Best Buys").

Red and White (Red and White Corp.). 32¢ (28¢). Heavy syrup. Firmness varied from can to can.

S. S. Pierce (S. S. Pierce Co.). 38¢ (32¢). Labeled extra heavy syrup but tested heavy.

Krasdale (A. Krasne Inc.). 37¢ (31¢). 1 lb. can, 19¢ (30¢). Heavy syrup.

Dellford (see "Best Buys").

IGA (Independent Grocers' Alliance). 32¢ (26¢). Heavy syrup.

Royal Scarlet (R. C. Williams and Co.). 37¢ (30¢). Heavy syrup.

Del Monte (see "Best Buys").

Libby's glass jar (Libby, McNeill and Libby). 35¢ (36¢). Heavy syrup. Size not uniform.

Kroger's Country Club (Kroger Grocery and Baking Co.). 29¢ (25¢). Labeled heavy syrup but tested extra heavy. Firmness varied from can to can.

Signet glass jar (U. S. Products Corp.). 39¢ (31¢). Quarters in heavy syrup. Size not uniform.

Rose-Dale (Libby, McNeill and Libby). 30¢ (27¢). 1 lb. can, 17¢ (27¢). Medium syrup. Firmness varied from can to can.

White Rose (Seeman Bros.). 1 lb. can, 19¢ (30¢). Heavy syrup.

Libby's (Libby, McNeill and Libby). 31¢ (27¢). Labeled heavy syrup, but tested medium. Firmness varied from can to can; size not uniform.

Finast (First National Stores). 27¢ (24¢). Labeled heavy syrup, but tested extra heavy. Firmness varied from can to can.

Del Monte glass jar (California Packing Corp.). 39¢ (36¢). Labeled heavy syrup, but tested medium. Somewhat soft.

Ecco (Economy Grocery Stores). 23¢ (19¢). Heavy syrup. Somewhat hard.

Monarch (Reid, Murdoch and Co.). 34¢ (26¢). Labeled extra heavy syrup but tested heavy. Firmness varied from can to can; size not uniform.

Island Manor (H. C. Bohack Co., Inc.). 21¢ (20¢). Labeled light syrup but tested medium. Somewhat mushy.

(Continued next page)

ACCEPTABLE—CONT'D

Heart's Delight (Richmond-Chase Co.). 28¢ (27¢). Heavy syrup. Firmness varied from can to can.

Iona (A & P.). 23¢ (21¢). Syrup tested medium. Firmness varied from can to can; size not uniform. Contents of one of 4 cans very mushy.

White Rose glass jar (Seeman Bros.). 37¢ (35¢). Heavy syrup. Firmness varied from can to can.

CANNED PEAS

Peas are rich in minerals and vitamins A, the B complex and C. The two main types used in canning are the Alaska or Early June peas and the later maturing sweet varieties. The Early June peas are commonly small. The sweet varieties, so called because of their natural sweet flavor, furnish the large size peas.

For home consumption peas are most often packed in No. 2 (1 lb., 4 oz.) cans, which contain enough for four generous servings.

The liquor of canned peas contains valuable soluble food material. It provides a good stock to enrich sauces and soups or an excellent base for a vegetable cocktail.

CU tested 255 cans, covering 60 of the most popular brands. Ratings were based on degree of maturity, which determines taste, tenderness, and appearance. Samples are listed in order of decreasing tenderness. Unless otherwise indicated, prices given are the average paid for No. 2 cans.

From the *Reports*, July 1942.

BEST BUYS

The following peas were considered to offer the best value for the money in the approximate order given.

Sugar Belle Blended Sweet (distributed by Safeway Stores). 12¢. Appearance good.

Pacific Small Early June (A&P). 16¢. Appearance excellent.

Asco Fancy Small Early (American Stores). 17¢. Appearance variable.

Highway Sweet (Table Products Co.). 10¢. Appearance excellent.

Kroger's Country Club Quality, Sifted Sweet (Kroger Grocery & Baking Co.). 15¢. Appearance good.

Lily of the Valley Extra Sifted Early June (Snider Packing Corp.). 16¢. Appearance fair.

BEST BUYS—CONT'D

Asco Fancy Sweet (American Stores). 17¢. Appearance variable.

Ecco Fancy Sweet Sifted (Economy Grocery Stores). 18¢. Appearance variable.

Bohack's Fancy Extra Sifted Sweet (H. C. Bohack Co.). 19¢. Appearance excellent.

Avondale Early Variety (Kroger Grocery & Baking Co.). 12¢. Appearance excellent.

Trupak Medium Sweet (Haas Bros.). 17¢. Appearance good.

Clover Farm Real Large Sweet (Clover Farm Stores). 17¢. Appearance good.

Del Monte Early Garden Sugar (Calif. Packing Corp.). 14¢ for No. 303 can. Appearance variable.

ACCEPTABLE

(In order of tenderness without regard to price.)

Libby's Tiny Sweet (Libby, McNeill & Libby). 18¢ for No. 303 can. Appearance fair.

Monarch Extra Small Sweet (Reid, Murdoch & Co.). 23¢. Appearance good.

Bohack's Fancy Extra Sifted Sweet (see "Best Buys").

Royal Scarlet Tiny Early (R. C. Williams & Co.). 26¢. Appearance excellent.

Monarch Medium Sifted Sweet (Reid, Murdoch & Co.). 22¢. Appearance good.

Stokely's Party Peas, Extra Small Sweet (Stokely Bros.). 15¢ for No. 1 (1 lb.) can. Appearance good.

Finast Fancy, Very Small Sweet (First National Stores). 20¢. Appearance variable.

Pacific Small Early June (see "Best Buys").

Grand Union Extra Sifted Early June (Grand Union Co.). 21¢. Appearance excellent.

Asco Fancy Small Early (see "Best Buys").

Ecco Fancy Sweet Sifted (see "Best Buys").

S & W Medium Size Sweet (S & W Inc.). 21¢. Appearance good.

Asco Fancy Sweet (see "Best Buys").

Lily of the Valley Extra Sifted Early June (see "Best Buys").

Sugar Belle Blended Sweet (see "Best Buys").

Clover Farm Real Large Sweet (see "Best Buys").

Trupak Medium Sweet (see "Best Buys").

(Continued next page)

ACCEPTABLE—CONT'D

Red & White Medium Small Sweet (Red & White Corp.). 19¢. Appearance variable.

Del Monte Early Garden Sugar (see "Best Buys").

Green Giant Sweet (Minnesota Valley Canning Co.). 15¢ for No. 303 can. Appearance excellent.

Co-op (Red Label) Grade A Sweet (National Cooperatives, Inc.). 17¢. Appearance good.

Kroger's Country Club Quality, Sifted Sweet (see "Best Buys").

Nation-Wide Fancy Sweet (Nation-Wide Service Grocers). 21¢. Appearance fair.

Bohack's Fancy Run of the Pod Sweet (H. C. Bohack Co.). 16¢. Appearance good.

Shurfine Sweet (National Retailer-Owned Grocers). 19¢. Appearance good.

Freshpak Sweet (The Grand Union Co.). 17¢. Appearance good.

White Rose Garden Sweet (Seeman Bros.). 17¢. Appearance very variable.

IGA Sifted Early June (Independent Grocer's Alliance). 17¢. Appearance good.

Yor Garden Sweet (First National Stores). 19¢. Appearance variable.

Clover Farm Supreme, Vacuum Packed, Sweet (Clover Farm Stores). 20¢ for vacuum can; appearance good.

Snider's Sweet (Snider Packing Corp.). 14¢ for 1 lb. jar equivalent to No. 303 can. Appearance fair.

Avondale Early Variety (see "Best Buys").

Highway Sweet (see "Best Buys").

Kitchen Garden Extra Large Sweet (The Grand Union Co.). 17¢. Appearance good.

Shurfine Fancy Grade Colossal (National Retailer-Owned Grocers). 15¢ for No. 303 can. Appearance poor.

Sultana Medium Size Early June (A&P). 14¢. Appearance excellent.

Dodge Medium Size Sweet (Haas Bros.). 13¢. Appearance variable.

White Rose, Tendabig, Sweet (Seeman Bros.). 14¢ for No. 303 can. Appearance very variable.

American Home Sifted Early June (National Tea Co.). 16¢. Appearance excellent.

Avondale Sweet Variety (Kroger Grocery & Baking

ACCEPTABLE—CONT'D

Co.). 12¢. Appearance variable.

Green Line Sweet (Economy Grocery Stores). 16¢. Appearance variable.

Royal Scarlet Large Sweet (R. C. Williams & Co.). 21¢. Appearance variable.

Libby's Jumbo Sweet (Libby, McNeill & Libby). 16.5¢ for No. 303 can, 17¢ for No. 2 can. Appearance variable.

Monarch Telephone Style Large Sweet (Reid, Murdoch & Co.). 18¢. Appearance good.

Blue & White Medium Early June (Red & White Corp.). 16¢. Appearance good.

Glendale Early June (Clover Farm Stores). 17¢. Appearance variable.

Yacht Club Large Sweet (Reid, Murdoch & Co.). 15¢. Appearance good.

Lily of the Valley Sifted Sweet (Snider Packing Corp.). 14¢ for No. 303 can. Appearance excellent.

Valley Prime Large Sweet (Minnesota Valley Canning Co.). 12¢ for No. 303 can. Appearance variable.

Yacht Club Extra Large Sweet (Reid, Murdoch & Co.). 17¢. Appearance good.

Iona Large Size Sweet (A&P). 14¢. Appearance good.

Blue & White Garden Run Sweet (Red & White Corp.). 16¢. Appearance good.

Yacht Club Medium Large Early June (Reid, Murdoch & Co.). 15¢. Appearance fair.

Gardenside Sweet (Table Products Co.). 8¢ for No. 303 can. Appearance poor.

NOT ACCEPTABLE

Co-op Grade C Early Variety (National Co-operatives, Inc.). 15¢. Appearance fair; peas dry and hard.

Rialto Sweet (Grand Union Co.). 14¢. Appearance very poor due to extremely turbid liquor; peas dry and hard.

Co-op Economy Pack Early June (National Co-operatives, Inc.). 12¢. Appearance very poor due to extremely turbid liquor and great variation in color of peas; peas dry and very hard.

Come Again Early June (National Tea Co.). 12¢. Appearance variable; peas dry and very hard.

Sweet Girl Sifted Early June (National Tea Co.). 14¢. Appearance good; peas dry and very hard.

(Continued next page)

NOT ACCEPTABLE—CONT'D

Phillips Early June (Phillips Packing Co.). 12¢. Appearance extremely poor due to extraneous material, broken peas, extremely turbid liquor and great variation in color of the peas; peas very dry and hard; dirt present in one can, stones in another; peas substandard.

CANNED TOMATO JUICE

Canned tomato juice should have a true ripe fruit flavor; if the fruit used was unripe, the juice may have a bitter taste, or if it was improperly processed, it may have a cooked flavor. The juice should be free from seeds, pieces of skin, leaf or stem, which are evidence of carelessness at the cannery.

An average serving (about four ounces) of tomato juice will supply a substantial portion of the day's requirement of vitamins A, B₁ and C.

CU tested an average of four samples each of 39 brands of tomato juice for vitamin C content (unless otherwise noted in the ratings, the amount present was about 20 milligrams in four ounces), flavor, color, presence of extraneous material and "mold count" (a microscopic procedure). High mold count indicates the use of rotten tomatoes or careless trimming of the tomatoes before processing.

The samples tested were packed in so many different sized cans that prices were noted in terms of cost per four-ounce serving. In any brand, the larger the can, the lower the cost per serving.

Figures in parentheses represent approximate cost per four-ounce serving.

From the *Reports*, November 1942.

BEST BUYS

The following brands were considered to offer the best value for the money in the order given.

Clover Farm (Clover Farm Stores, Cleveland). 46 oz. can, 25¢ (2.2¢). Flavor excellent. Tended to separate slightly.

Del Monte (California Packing Corp., San Francisco). 12 oz. can, 7¢ (2.4¢). Flavor excellent. Tended to separate.

Grand Union—Grade A (Grand Union Co., NYC). 20 oz. can, 10¢ (2¢). Flavor excellent. Tended to separate.

Island Manor—Fancy (H. C. Bohack Co., NYC). 24 oz.

BEST BUYS—CONT'D

can, 10¢ (1.6¢). Flavor excellent. Vitamin C content variable.

Sunny Dawn (General Food Products Co., Oakland, Calif.). 18 oz. can, 8¢ (1.8¢). Flavor good.

ACCEPTABLE

(In approximate order of quality without regard to price)
S & W (S and W Fine Foods, San Francisco). 12 oz. can, 10¢ (3.3¢). Flavor excellent.

Clover Farm (see "Best Buys.").

Del Monte (see "Best Buys.").

Grand Union—Grade A (see "Best Buys.").

Snider's (Snider Packing Corp., Rochester, N. Y.). 20 oz. can, 11¢ (2.2¢). Flavor excellent.

Trupak (Haas Bros., San Francisco). 15 oz. can, 9¢ (2.4¢). Flavor good. Vitamin C content variable.

Island Manor—Fancy (see "Best Buys.").

Sunny Dawn (see "Best Buys.").

Red and White (Red and White Corp., Chicago). 13½ oz. can, 10¢ (3¢). Flavor good.

Campbell's (Campbell Soup Co., Camden, N. J.). 20 oz. can, 10¢; 14 oz. can, 9¢ (2¢, 2.6¢). Flavor good.

Monarch (Reid, Murdoch, Chicago). 20 oz. can, 13¢ (2.6¢). Flavor good. Tended to separate slightly.

College Inn (College Inn, Chicago). 47 oz. can, 21¢; 13½ oz. can, 9¢ (1.8¢, 2.7¢). Flavor good. Tended to separate slightly.

Finast (First National Stores, Somerville, Mass.). 24 oz. can, 9¢ (1.5¢). Flavor good. Tended to separate slightly.

Armour's Star (Armour, Chicago). 24 oz. can, 12¢; 20 oz. can, 12¢ (2¢, 2.5¢). Flavor good.

Premier (Francis H. Leggett, NYC). 12 oz. can, 10¢ (3.3¢). Flavor good. Tended to separate slightly. Contained shreds of skin, leaf, etc.

I G A (Independent Grocers Alliance, Chicago). 20 oz. can, 10¢ (2¢). Flavor good. Tended to separate slightly. Contained seeds and stem particles.

Krasdale (Krasdale Foods, NYC). 46 oz. can, 25¢; 20 oz. can, 12¢ (2.2¢, 2.4¢). Flavor good. Tended to separate.

Heinz (H. J. Heinz, Pittsburgh). 12 oz. can, 9¢ (3¢). Flavor variable from poor (bitter, off flavor) to good.

Phillips (Phillips Packing Co., Cambridge, Md.). 20 oz.

(Continued next page)

ACCEPTABLE—CONT'D

can, 9¢ (1.7¢). Flavor good. Tended to separate.

Co-op—Grade A Red Label (National Co-operatives, Chicago). 24 oz. can, 10¢ (1.7¢). Flavor excellent. Low vitamin C content. Tended to separate.

Dellford (Middendorf and Rohrs, NYC). 46 oz. can, 25¢; 12 oz. can, 9¢ (2.2¢, 3¢). Flavor good. Tended to separate slightly.

Kemp's Sun-Rayed (Sun-Rayed Co., Frankfort, Ind.). 12 oz. can, 8¢ (2.7¢). Flavor fair.

Nation Wide (Nation-Wide Service Grocers, Brockton, Mass.). 20 oz. can, 12½¢ (2.5¢). Flavor good. Tended to separate.

Welch's, Grade A Fancy (Welch Grape Juice Co., Westfield, N. Y.). 16 oz bottle, 15¢ (3.8¢). Flavor good. Vitamin C content variable from low to average.

Crosse and Blackwell—Fancy. (Crosse and Blackwell, Baltimore, Md.). 14 oz. can, 10¢ (2.8¢). Flavor good. Tended to separate.

Royal Scarlet (R. C. Williams and Co., NYC). 24 oz. can, 13¢ (2.2¢). Flavor good. Tended to separate.

Libby's (Libby, McNeill and Libby, Chicago). 14 oz. can, 9¢ (2.6¢). Flavor good. Tended to separate.

Hurff (Edgar F. Hurff Co., Swedesboro, N. J.). 20 oz. can, 10¢; 12½ oz. can 6¢ (2¢). Flavor good. Vitamin C content variable from low to average. Tended to separate slightly.

Ecco—Fancy (Economy Grocery Stores, Boston). 20 oz. can, 9¢ (1.8¢). Flavor good. Tended to separate. One out of 4 cans tested had a high mold count.

Heinz (H. J. Heinz Co.). 16 oz. bottle, 10¢ (2.5¢). Flavor good. Low vitamin C content.

Beech-Nut (Beech-Nut Packing Co., Canajoharie, N. Y.). 14 oz. can, 10¢; 12½ oz. can, 10¢ (2.8¢, 3.2¢). Flavor fair. Low vitamin C content. Tended to separate slightly.

Iona (A & P Stores). 24 oz. can, 9¢ (1.5¢). Flavor fair (one can had a cooked flavor). Low vitamin C content. High mold count. Tended to separate.

Stokely's Finest (Stokely Bros., Indianapolis). 20 oz. can, 12¢ (2.3¢). Flavor fair. Tended to separate. Contained small pieces of leaf, stem, etc. Very low vitamin C content.

NOT ACCEPTABLE

Asco—Grade A—Fancy (American Stores). 12½ oz. can, 6¢ (1.9¢). Flavor good. Low vitamin C content. Contained seeds, particles of stem; one can contained fly.

Kroger's Country Club—Grade A (Kroger Grocery and Baking Co.). 24 oz. can, 9¢ (1.5¢). Flavor good. Mold count average in 4 cans was just under the USDA limit. One can contained a fly.

P and G (Paxton and Gallagher Co.). 18 oz. can, 10¢ (2.2¢). Flavor good. Very high mold count.

Swift's (Swift and Co.). 20 oz. can, 12¢ (2.4¢). Flavor good. Tended to separate. Vitamin C content variable from low to average. One can contained a fly.

White Ribbon (Krenning-Schlapp Grocer Co.). 12½ oz. can, 9¢; 14 oz. can, 10¢ (2.9¢). Flavor variable from good to excellent. All cans showed some seeds and small pieces of skins. One can contained three flies.

White Rose (Seeman Bros., Inc.). 20 oz. can, 10¢ (2¢). Flavor varied considerably. One can of the original four bought for testing had a most disagreeable flavor. Two more cans of the same code were bought about two months later to check on the flavor: one had the same bitter, unpleasant flavor as previously, the other was all right.

CANNED TOMATOES

Tomatoes are an important part of the American diet and they rank high in content of vitamin C, vitamin A and the B vitamins.

For sauces or drinks, tomato juice or puree is generally less expensive and more convenient than canned tomatoes. For salads and general cooking canned tomatoes are least expensive, except during the Summer season; when the price of fresh tomatoes falls below about 10¢ a pound, they are likely to be the better buy.

Tomatoes are usually packed in No. 2 cans (1 lb., 3 oz.) containing about 2½ cups of tomatoes plus juice, or No. 2½ cans (1 lb., 12 oz.) containing approximately 3½ cups of tomatoes plus juice. Smaller sizes have been discontinued for the duration.

The best packs are made from firm, fairly large tomatoes, which have been peeled and cored. Cores should be removed because worms may be lodged there. In the lower quality packs the tomatoes are of smaller or vari-

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able size and often imperfect or trimmed. Trimmed tomatoes can give as good value as whole ones if only ripe tomatoes are used and all imperfections and cores are carefully removed. If unripe fruit is used, however, it causes a bitter taste.

One hundred and eighty-six cans of 35 brands were examined for drained weight, presence of whole tomatoes, vitamin C, off-flavor (i.e., the bitter taste of unripe tomatoes), peel, blemishes and core material. Half a cup of all brands of tomatoes packed in cans had sufficient vitamin C to give the minimum daily requirement of this vitamin, but tomatoes packed in glass containers were poor in vitamin C content.

The order of brand ratings is based on "edibility," flavor, vitamin C content and weight of tomato solids. Special note is taken of the presence of whole tomatoes and, since peel, core material and blemishes indicate careless handling, their presence is also noted.

Unless otherwise indicated, prices given were the average paid for a No. 2 can.

From the *Reports*, September 1942.

BEST BUYS

The following brands were considered to offer the best value for the money in the order given.

Bohack's (H. C. Bohack Co., NYC). 17¢ for No. 2½ can.

Flavor excellent; tomatoes mostly whole.

Bohack's Fancy (H. C. Bohack Co.). 14¢. Flavor excellent; tomatoes whole.

Sultana (A & P Stores). 13¢; 17¢ for No. 2½ can. Flavor variable; few whole tomatoes; cores and peel present.

Co-op Grade B Red Label (National Co-operatives, Inc., Chicago). 12¢; 16¢ for No. 2½ can. Flavor good; few whole tomatoes.

Asco (American Stores). 13¢. Flavor good; few whole tomatoes.

Ecco (Economy Grocery Stores). 12¢. Flavor good; few whole tomatoes.

Royal Scarlet (R. C. Williams & Co., NYC). 16¢; 20¢ for No. 2½ can. Flavor excellent; tomatoes mostly whole.

White Rose (Seeman Bros., NYC). 15¢; 21¢ for No. 2½ can. Flavor good. Tomatoes mostly whole.

Finast (First National Stores). 12¢. Flavor extremely variable; few whole tomatoes.

ACCEPTABLE

(In order of edibility and nutritional value — flavor and vitamin C content — without regard to price; other factors were not taken into consideration in determining order of ratings, but see comments.)

Bohack's (see "Best Buys.").

Royal Scarlet (see "Best Buys.").

Bohack's Fancy (see "Best Buys.").

White Rose (see "Best Buys.").

Red & White (Red & White Stores). 16¢. Flavor variable; few whole tomatoes.

Libby's (Libby, McNeill & Libby, Chicago). 17¢. Flavor good; few whole tomatoes; cores and peel present.

Nation-Wide (Nation-Wide Service Grocers). 17¢. Flavor excellent; few whole tomatoes.

Sultana (see "Best Buys.").

Asco (see "Best Buys.").

Shurfine (National Retailer-Owned Grocers). 17¢. Flavor good; tomatoes mostly broken.

Sun Glory (Economy Grocery Stores). 15¢. Flavor good; tomatoes mostly broken.

Co-op Grade B Red Label (see "Best Buys.").

Blue & White (Red & White Corp.). 15¢; 21¢ for No. 2½ can. Flavor variable; few whole tomatoes.

Finast (see "Best Buys.").

Grand Union (The Grand Union Co.). 16¢. Flavor extremely variable; tomatoes mostly whole.

S and W (S and W, San Francisco). 16¢ for No. 1 tall can (15½ oz.). Plum tomatoes generally used for sauces, lack the flavor of the larger tomatoes; mostly whole but uncored.

Del Monte (California Packing Corp., San Francisco). 13¢; 20¢ for No. 2½ can. Flavor good; few whole tomatoes.

Yacht Club (Reid, Murdoch, Chicago). 16¢. Flavor good; few whole tomatoes.

American Home (National Tea Co., Chicago). 15¢. Flavor good; few whole tomatoes.

Ecco (see "Best Buys.").

Monarch (Reid, Murdoch & Co.). 16¢. Flavor good; few whole tomatoes.

A & P (A & P Stores). 14¢; 18¢ for No. 2½ can. Flavor good; tomatoes mostly whole; low drained weight.

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ACCEPTABLE—CONT'D

Dodge (Haas Bros., San Francisco). 17¢. Flavor good; cores and peel present; tomatoes mostly broken.

Avondale (Kroger Grocery & Baking Co.). 13¢. Flavor variable; few whole tomatoes; cores and peel present.

Stokely's (Stokely Bros., Indianapolis). 14¢. Flavor good; few whole tomatoes.

NOT ACCEPTABLE

Snider's (Snider Packing Corp.). 15¢ for 1 lb. jar. Flavor good; very low vitamin C content; few whole tomatoes.

Co-op Grade C Blue Label (National Co-operatives, Inc.). 14¢, 18¢ for No. 2½ can. Flavor extremely variable; few whole tomatoes; cores and peel present.

Freshpak (Grand Union Co.). 16¢ for No. 2½ can. Flavor extremely variable; few whole tomatoes; cores and peel present.

Glendale (Clover Farm Stores Corp.). 13¢, 20¢ for No. 2½ can. Flavor and vitamin C content variable; cores and peel present; tomatoes mostly broken.

Iona (A & P Tea Co.). 9¢; 13¢ for No. 2½ can. Flavor extremely variable; few whole tomatoes; cores and peel present.

IGA (Independent Grocers Alliance). 14¢; 17¢ for No. 2½ can. Flavor extremely variable; few whole tomatoes; cores and peel present.

Trupak (Haas Bros.). 20¢ for No. 2½ can. Flavor poor; few whole tomatoes.

Phillips (Phillips Packing Co., Inc.). 15¢. Flavor poor; few whole tomatoes; cores and peel present.

Rialto (The Grand Union Co.). 10¢. Flavor poor; few whole tomatoes.

Come Again (National Tea Co.). 15¢. Flavor poor; few whole tomatoes; cores and peel present.

CHEESE

All cheese is made from curdled milk, with more or less of the whey or watery portion drained away. The more whey that is drained away, the harder the cheese and the better it keeps. Hard cheeses are more concentrated foods than soft ones, but almost any cheese except cream cheese contains more protein per pound than does good quality beef chuck. All cheeses excepting those made from skimmed milk are at least as rich as butter in vitamin A; roquefort is an especially good source

of this vitamin. Cheese is also a good source of calcium and phosphorus, the hard types more so than the soft.

There are at least 18 distinct types of cheese and over 400 different varieties. These are some of the more common ones:

Blue or Bleu cheese, a semi-soft, crumbly cheese resembling Roquefort, delicately veined with blue-green mold, rich and tangy in flavor.

Brick, semi-hard, with a sharp flavor, halfway between Cheddar and Limburger.

Brie, a soft cheese made much like Camembert, with a pronounced odor and a sharp, characteristic taste.

Camembert, creamy in consistency when ripe, with a rich flavor and aroma.

Cheddar or American which may be mild or sharp, cured or uncured. When cured it has a delicious nut-like flavor.

Cottage, a coarse-grained skimmed milk cheese, also with a fresh sour-milk taste.

Cream, a smooth, rich cheese made of milk and cream, with a fresh sour-milk taste.

Edam, ball-shaped with a red rind. The flavor is similar to that of Cheddar, but somewhat sweeter and milder.

Gorgonzola, mold-ripened like Blue cheese; compact, creamy, and blue-veined. Flavor is delicately piquant.

Gouda, flat disc-shaped cheese, a bit softer than Edam but similar in flavor.

Liederkranz, a soft dessert cheese, between Limburger and Camembert in flavor.

Limburger, a semi-hard cheese whose rind has a strong carrion-like odor. The cheese itself has a pungent and delicious flavor.

Muenster, harder than Limburger with a milder flavor.

Neufchâtel, similar to cream cheese, but lower in fat and higher in moisture content.

Parmesan, a very hard crumbly Italian cheese made from partially skimmed milk, much used as grated cheese in cooking.

Pineapple cheese, a very hard Cheddar, shaped like a pineapple.

Romano, a black-coated hard, dry cheese; salty and with a sharp, full flavor.

Roquefort, delicately veined with greenish mold, and with a strong, rich flavor.

(Continued next page)

Sap Sago or green cheese, a very hard Swiss skim milk cheese containing dried leaves of a clove-like plant. Excellent for grating; keeps well.

Smoked cheese, also very hard, usually sausage-shaped, with a smoky taste.

Stilton, hard, with a flavor derived from a characteristic green mold.

Swiss, fine-textured and creamy in color, with a mild, pleasing taste. Has large holes or eyes which should have a shiny surface.

The flavor and texture of cheese are governed mainly by the way the milk is curdled, how the curd is separated from the whey, how the curd is processed, whether the cheese is ripened, what organism ripens it, and how long the ripening takes place. The source of the milk, whether from a cow, goat or ewe, has only a slight influence. Most cheeses are made from whole cow's milk. Those made from skim milk must by Federal law be so labeled.

Pasteurized "process" cheese—packaged types like *Velveeta* and *Pabst-Ett*—is made by melting together various lots of a cheese, along with water and up to 3% of an emulsifying agent. The cheese used as a base is seldom of high quality. Once it is pasteurized, process cheese does not change in flavor, because aging ceases. Connoisseurs of cheese seldom like process cheeses, though the typically mild flavor and even consistency appeals to some persons.

Cheese in the Menu: Its high protein content and its variety of flavors make cheese an excellent meat substitute. Here are a few suggestions for using the various types:

Blue cheese: Use stuffed in celery; as flavoring for salad dressing; as a dessert cheese served with crackers.

Cheddar or American cheese: Use for Welsh rarebit and many other recipes; for sandwiches, melted or unmelted; served on crackers. When too dry to be served with crackers, Cheddar cheese may be grated and used for cooking. But buying it expressly for grating is generally not good economy; ready-grated Cheddar, though higher in price, is already dried and therefore contains more cheese per pound.

Cottage cheese—about the most economical and versatile cheese you can buy. Use in salads, as stuffing for

celery; as a spread mixed with fruits or raw vegetables; mixed with sour cream and berries; fried as cheese balls; baked with macaroni; made into cheese cake; with jam and crackers.

Cream cheese—as versatile, though less economical than cottage cheese. Use in place of butter; combined as a spread with pimento, olives, relish, pineapple or any of a number of sharper cheeses. If bought in bulk or in packages no less than half-pound size, cream cheese will probably cost a few cents less than butter. Prepared combination spreads can be bought, but doing your own combining is simple and is apt to be less expensive.

Liederkranz and Camembert—high in price. Use as supper or dessert cheese.

Parmesan—high in price but high in food value. Use grated in onion soup, for cheese soufflé, cheese croquettes, cheese rice or any number of vegetable-cheese or egg-and-cheese casseroles.

How to Cook with Cheese: To prevent it from becoming tough, cheese should be melted over low heat, preferably in a double boilet. If it is not grated, it should be broken into small pieces so that it will blend properly.

How to store cheese: Hard cured cheese will keep for some time if wrapped in damp cheesecloth and kept in a cool place. A small piece may be kept in a covered dish in the least cold part of the refrigerator, with a small glass of salt water beside it in the dish. Grated cheese need not be refrigerated but should be stored in a covered jar.

From the *Reports*, June 1943.

COCOA

Cocoa beans are imported from Brazil and West Africa; the current imports are considerably lower than normal. The grinding quota is 80% of the 1941 rate, and though part of it goes to the armed forces, more is now available for civilian consumption than there was last year.

The difference between cocoa and chocolate is in fat content. By definition of the Food and Drug Administration, chocolate must contain at least 50% cocoa fat. Cocoa is the powder made from chocolate after some of the natural oil has been pressed out.

Three types of cocoa are in general use, two of which are covered by Federal specifications:

64 COCOA, COFFEE

Breakfast Cocoas: These must have a cocoa fat content of at least 22% to meet F&DA requirements. They are at least as nutritious as the next class, Dutch Process Cocoa, and much less expensive.

Dutch Process Cocoas: These have the same fat requirement as Breakfast Cocoa, but are roasted with an alkali, which reacts chemically with the cocoa, increasing the smoothness and modifying color and flavor. Dutch Cocoas are generally more expensive than other types, and some authorities believe that the alkali treatment may reduce their digestibility.

General Purpose Cocoas: Since these are not covered by F&DA specifications, there is no set figure on their fat content. Generally it ranges from 10% to 18%. The average cost is much lower than that of either of the other two types. Cocoa butter has no flavoring value, so that for most purposes, general purpose cocoa is as satisfactory as, and cheaper than breakfast cocoa.

Keep cocoa covered and protected from light, and store it in a cool dry place, because the oils in cocoa deteriorate easily.

To prevent cocoa from lumping, first add the necessary sugar, then make it into a paste with cold water, then add the hot milk.

Although cocoa is often used in feeding young children, it contains the drug theobromine, which is closely related to caffeine. Theobromine, besides its stimulating effect (not so strong as that of caffeine), is also a diuretic (tends to increase flow of urine). For these reasons, cocoa should not be given to nervous children, or to any children just before bedtime.

COFFEE

Although coffee rationing restrictions have been removed due to an increased supply of green coffee stocks, both economy and conservation still dictate that consumers do what they can to get the most cups possible per pound. Here are some suggestions on how this can be done.

Care in brewing is far more important than the variety of bean used; most persons cannot tell one brand from another when both are brewed to the same strength. The first economy, therefore, is to buy the cheapest dark brown roast you can get fresh. Up to the dark brown

stage, roasting develops the flavor of coffee, but very dark roasting (the almost black French roast or the charcoal-black Italian roast) destroys most of the caffeine and delicate flavor and produces bitterness.

The flavor deteriorates rapidly once coffee is roasted, and more rapidly after it is ground. Buy freshly-roasted coffee and, if you can, grind it just before use; otherwise, have it ground just before you buy it, and keep it in the refrigerator.

Addition of a small amount of Italian roast coffee (an ounce or two to a pound of regular coffee) will increase your yield by a third to a half, with little loss of flavor. Adding a small amount of chicory (no more than half an ounce to a pound of coffee) also increases the yield about 30% without damaging flavor or aroma. Pure extract of chicory is extremely bitter, but experts consider that a small amount actually improves the flavor of the brew.

A tablespoon of coffee to a cup of water provides enough flavoring materials for a rich brew.

Among the methods of making coffee, "double-drip" is one of the most economical. Boiling water is allowed to drip through the grounds and then poured back and allowed to drip through the grounds a second time. The drip process extracts all of the caffeine and flavor, whereas longer extraction or hotter water (as in long percolation or boiling) sends the volatile flavoring oils off into the air. Double dripping increases the yield about 30% and, in the opinion of many, improves the brew. Coffee for dripping should be ground very fine and a filter paper used if necessary to keep the grounds from going through the holes.

The vacuum-return method (e.g. Silex) yields flavor equal to the drip process; it is somewhat more economical than single drip, less so than double drip.

Short percolation gives satisfactory flavor but is uneconomical; longer percolation results in more complete extraction but sacrifices much of the flavor quality.

Boiling provides the most thorough extraction, but most of the aroma and pleasant coffee quality are lost in the process.

Enamel or glass pots give the best results for percolation or boiling, since the tannic acid extracted reacts with metal. Aluminum or glass is quite satisfactory for the drip

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or vacuum return method. Iron is to be avoided. Any pot must be washed well with soap and water after use.

Left-over coffee, poured into a glass jar, can be cooled in the refrigerator for iced coffee or mixed with carbonated water and sugar for a pleasant Summer drink. It can be used in gelatin desserts, puddings and cakes, or it can be added to the freshly-brewed coffee for the next meal. With slight loss of flavor, left-over coffee can be reheated to drinking temperature, but care must be taken not to bring it to a boil.

From the *Reports*, August 1942.

DEHYDRATED FOODS

Dehydration is playing an increasingly important part in the food preservation picture; dehydration of vegetables has expanded an estimated 8000% during the past few years. In 1940, 15 commercial dehydrating plants produced a total of five million pounds of dried foods; in 1943, 250 plants were producing some 400 million pounds. Comparatively little of this commercial produce is available for civilian use, however.

There are some dehydrated foods, however, which will be available to civilians. Dehydrated soups are plentiful, and a limited supply of dehydrated vegetables, eggs and milk can also be bought.

• DEHYDRATED SOUPS

Proper packaging is essential to protect dehydrated soups from moisture, which destroys vitamins and flavor, and from insects. Glass jars or tins are best, but treated fiber-board containers, or several wrappings of moisture-proofed paper or cellophane are also satisfactory. Single bags of paper or cellophane give least protection.

Before buying dehydrated soup, inspect the package for breaks or insect holes. With flimsily wrapped packages, spread the contents on a clean piece of paper and look for insects, larvae or the fine web of insect excreta before cooking.

CU tested 13 brands of chicken noodle soup, 15 brands of vegetable noodle soup, and 10 brands of other flavors including beef noodle, pea, asparagus, onion soup and bouillon.

Taste tests were considered the most important factor in rating. All soups were carefully prepared according to the instructions, and sampled by each of about 25 tasters.

MISCELLANEOUS SOUPS: FLAVOR RATINGS*(Listed in order of taste preference within each group)*

Brand and Packer or Distributor	Net Weight (oz.)	Price per Pkg. (\$)	Cost per 4-oz. Serving (\$)	Taste Rating
BEEF NOODLE SOUP				
Beefy-Bowl (Carjion Food Prod. Co.).....	2 3/4	9	1.5	Fair
Tetley's Jif-e (Metropolitan Pack).....	2 1/4	8	2.1	Fair
PEA SOUP				
Susan Baker (Union Food Prod.).....	3	9	2.3 ¹	Good
Romar (Romanoff Caviar Co.).....	4	20	3.0	Good
Sardik (Sardik Food Prod.).....	7	59	7.4 ¹	Good
Tetley's Jif-e (Metropolitan).....	2 1/4	10	3.3	Good
ASPARAGUS SOUP				
Romar (Romanoff Caviar Co.).....	4	20	2.9 ²	Good
Knorr (Knorr Food Prod.).....	4	20	2.9 ²	Good
ONION SOUP				
French Kettle (French-Kitchen Foods).....	3 1/4	35	7.0	Good
Souplets (Amer. Dietaiids Co.) ³	3	49	2.7	Good

¹ Directions call for addition of butter.² Directions call for addition of butter and heavy cream; evaporated milk was used instead of cream.³ Package contains 18 tablets, each fortified with 100 I.U. vitamin B₁.

FLAVOR RATINGS OF DEHYDRATED SOUPS

(Listed in order of preference in taste tests, best first)

Brand and Packer or Distributor	Carbo-hydrate %	Net Weight (oz.)	Price per Pkg. (¢)	Cost per 4-oz. Serving (¢)	Cooking Time ¹ (min.)
CHICKEN NOODLE					
Continental (Thom. J. Lipton).....	62.4	2½	10	2.5	7
Dainty (Dainty Food Mfrs.).....	74.1	2½	12	3.0	10
Co-op (National Cooperatives).....	66.8	2½	9	2.3	7
Wyler's New (Wyler & Co.).....	58.8	2½	10	2.5	5
Wyler's Concentrated	58.0	2½	15	3.8	5
Soup's On (Universal Cocoa Prod.).....	63.9	2½	8	1.7	5
Treasure Island (Treas. Is. Food).....	64.1	2½	8	2.1	5
Minute Man (Skinner & Eddy).....	63.1	2½	10	2.5	7
Ma's Brand (Kientzel Noodle Co.) ²	70.1	3	10	1.7	25
Tetley's Jif-e (Metropolitan Corp.).....	61.7	2¼	8	2.1	7
Dainty (Dainty Food).....	59.6	2½	10	2.5	7
Mrs. Grass' (L. J. Grass Noodle).....	63.4	2½	10	2.0	10
Harvest Fresh (Harvest Fresh Co.).....	62.6	1½	5	2.5	7
VEGETABLE NOODLE					
Betty Crocker (Gen'l Mills).....	61.7	2¾	9	1.5	20
Mrs. Grass' (L. J. Grass).....	60.4	2¾	8	1.4	20
Meisenzahl's (Meisenzahl Lab.).....	58.8	2¾	10	1.7	15
Kux-Kwik (A. Zarega's Sons).....	64.3	2¾	10	1.7	20
Soup's On (Universal Cocoa).....	71.8	2½	8	1.7	8

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Soup's On (Universal Cocoa).....	71.8	2½	8	1.7
Zoop (Ravarino-Freschi Inc.).....	70.2	3	10	1.7
Noodleman (A. Goodman & Sons).....	66.3	2½	10	2.5
Pantripak (Pantripak Food).....	58.2	4½	8	1.0
Jewel (Jewel Tea Co.).....	69.4	6¾	36	2.0
Goodman's (A. Goodman).....	63.4	2	10	1.7
Tetley's Jif-e (Metropolitan Pack.).....	65.4	2¼	10	2.5
Caruso (Atlantic Macaroni Co.).....	77.5	8	8	1.0
Dainty (Dainty Food).....	72.7	1½	5	1.3
Milani's (Louis Milani Foods).....	46.2	2½	10	2.0
Hall-Mark * (Stein-Hall Co.).....	63.4	8	10	1.3

* "Cooking time" does not include time required to bring water to a boil.

* Contains chicken bouillon; cooking directions call for addition of butter.

* Poorly packed.

* Mostly peas, barley, rice and noodles; little, if any, other vegetables.

* Directions say "or till tender," which may take longer.

* Label says "10-minute brand"; directions say to cook 20 minutes.

70 DEHYDRATED FOODS

The identity of the samples was not known by the tasters, and each tasted every soup from two to four times in the course of the test.

Since individual tastes vary, you may not agree with the opinions as expressed by CU tasters. CU suggests that you try some of the brands rated high until you locate one which suits your family's taste preference.

In addition to taste tests, packages were carefully examined to determine freedom from moisture and insect infestation, and label statements as to weight and content were checked. The carbohydrate (starchy material) content of each soup was found by separating noodles and starchy materials like potatoes, peas, etc. from the other ingredients, and calculating from the known carbohydrate content of each of these substances. If you like a thick, starchy soup, select one with a high carbohydrate content.

Chicken noodle soups were combinations of noodles with chicken fat or bouillon (or both) and vegetable or wheat protein derivative, seasoning, spice, and small amounts of dehydrated vegetables like parsley, onion, tomato, carrot.

Vegetable noodle soups were of two types. Besides seasoning, noodles and vegetables or wheat protein derivative, they contained either large amounts of carbohydrates (peas, rice, barley, lentils) or carrots, tomatoes, celery, onion, and other dehydrated vegetables. Most brands of vegetable soup required addition of butter or oleomargarine before cooking.

From the *Reports*, February 1943.

• HOME DEHYDRATION

A number of simple, inexpensive dehydrators for home use have been developed and are available on the market or can be made simply at home. The food to be dehydrated must first be cooked or "blanched"; then it is placed in the dehydrating unit, where the heat and circulating air remove the water, leaving a dry mass a fraction of the original size. Such dehydrated fruits and vegetables, when subsequently cooked, do not compare too favorably in flavor with fresh or canned products. But for victory gardeners or others who have available cheap supplies of fresh products, and have no access to a pressure canner, home dehydration offers a ready means for keeping a nutritious vegetable supply on hand.

DRIED FRUITS

Dried fruits will be of little help in making up for shortages of canned fruits in 1944. Heavy demands for military and lend-lease use have brought about a shortage of prunes and raisins and practically eliminated dried apricots, peaches, and pears from the civilian market. Domestic production of dates is very small, and there are no imports. The supply of figs will be little affected by government needs, but because of shortages of other dried fruits and the lack of imports, civilian demand will probably greatly exceed the amounts available.

Dried apricots, peaches, apples, pears (and sometimes other fruits) are commonly treated with sulfur dioxide to preserve them, to keep them from darkening and to increase their moisture content. Most authorities believe that the treatment is harmless.

Examine the labels on dried-fruit packages carefully. Added sulfur dioxide should be indicated. The words "moisture added" on a label usually mean simply that you will get less fruit for your money. If you buy dried fruits in bulk, look for such statements on the box or carton in which they are kept.

Inspect all dried fruits carefully. Dirty, moldy and insect-infested dried fruits are all too common.

Dried fruits may be decidedly dangerous if swallowed whole or incompletely chewed, because when they become moist they swell up and may obstruct the intestine.

EGGS

Eggs are an excellent source of vitamin A and also contain vitamins B₁, G and D, proteins, fats and minerals.

Grades of eggs have little significance unless the eggs are properly stored, both before sale and at home. Unless they are kept at refrigerator temperatures, they deteriorate rapidly.

Most States have egg-grading laws, some of which differ in certain respects from the standards set up by the U. S. Dept. of Agriculture. The Federal law establishes four grades in which eggs may be classified according to quality.

1. Grade AA or U. S. Special: This top grade is seldom available on the market.

2. Grade A or U. S. Extra: For all practical purposes, the best egg you can buy; suitable for soft-boiled eggs.

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72 EGGS, FATS AND OILS

3. Grade B or U. S. Standard: Generally priced much lower, satisfactory for cooking where the egg is combined with other tastes. Many families find grade B eggs satisfactory for all uses.

4. Grade U. S. Trade: For further economy, this egg may be used in foods where the egg taste matters little.

Advances in storage of eggs in recent years have reached the point where today well-stored eggs are considered as good as fresh ones. Storage eggs are often much cheaper. They can be graded just like fresh ones, except that the two top grades must be labeled "storage" and the lower grades may not be labeled "fresh."

Federal grades have two advantages over many State grades. Federal regulations require statement of time of grading. This is important, since storage for a few days under poor conditions can change the quality of an egg. Federal grading also establishes standard weight limits for small, medium and large eggs. Usual unofficial designations, "small" and "large," are vague terms; there may be wide variations in weight from one dozen to the next.

FATS AND OILS

Fats and oils are a cheap source of energy; they satisfy appetite and add to the palatability of other foods, and they provide necessary fatty acids. The vitamin A content of cooking fats is unimportant, because cooking temperatures generally destroy the vitamin. The vitamin content of all refined oils is negligible.

Medical opinion agrees that one type of oil is about as digestible as another. Cases of indigestion are due to individual sensitivity to certain types. However, there is a limit to the amount of fat that can be eaten without discomfort.

Because of heavy military demand for fats and oils, civilian supplies have been severely rationed, and there is an intensive salvage campaign for fats and oils of all kinds.

Olive oil of good quality is practically unavailable, and butter is scarce. Instead, consumers must learn to use other fats and oils, like oleomargarine (see page 20) and the vegetable oils made from peanuts, soya beans, cotton-seed and corn.

Salad Oils: The olive oil which is still available today is usually a bland, refined product. Because it is scarce

and expensive, it is often blended with cheaper oils; also, other oils are artificially colored and flavored to resemble olive oil. Blends and imitations are satisfactory, but sometimes they are dishonestly labeled and sell for exorbitant prices.

Buy olive oil from reliable dealers, not from peddlers; much adulterated oil is being "bootlegged" from door to door. Pure olive oil is less costly if bought in quantities over a quart. Blends can be mixed at home at great savings. Try mixing three parts of soya bean or peanut oil with one part of olive oil; vary the proportions to taste.

Frying Fats: For frying, vegetable oils and hydrogenated oils (*Crisco* type) are best; they don't smoke at low temperature or develop pungent odors and off-flavors. Frying fats can be re-used once or twice if strained and stored at low temperatures, but once used, they tend to deteriorate rapidly. Taking a limited amount for each frying is better economy than repeated re-use of cooked oil. All waste fats and oils should be collected and turned in for salvage.

Shortening Fats: Hard fats, such as hydrogenated oils and lards, are best for shortening. Hydrogenated oils are merely vegetable oils which have been solidified by treatment with hydrogen gas. This process gives them better keeping qualities.

Lard: Lard is of several types: "leaf" lard, made from the internal fatty tissues of the hog, is best; "back" lard, rendered from surface tissues, is satisfactory but should cost much less. Some manufacturers use the word "leaf" in their brand names, but this doesn't necessarily mean that the product is a leaf lard. Look for a separate statement on the label indicating the source of the lard. Also look for the legend "U. S. Inspected and Passed by the U. S. Dep't of Agriculture," which indicates that they were packed under Federal supervision.

The most commonly used vegetable oils, both hydrogenated and liquid, are corn, cottonseed, peanut, soya bean or mixtures of these. Blends of several are superior to a single oil in flavor and keeping qualities. Artificial color or flavor in salad oils frequently masks defects in quality and therefore should be avoided.

Fats should generally be kept under refrigeration, and only vegetable oils and hydrogenated oils of good keep-

ing qualities should be stored for any length of time. Oils put up in glass must be kept in a cool dark place to prevent spoilage. Olive oil may last a year or more, but no processed oils like cottonseed, corn, sunflower or soya bean will be usable for more than a few months.

From the *Reports*, August 1941, October 1942, February 1943.

FRESH FISH

Fish are an excellent source of animal protein of the type found in meat and poultry. In addition, many of them are especially good sources of vitamins and minerals.

In many localities, fresh fish can be bought cheaply in season. Check prices each time before you buy, for there are great seasonal price variations. And don't be afraid to try cheap varieties with which you may not be familiar. Often they are excellent in both taste and value.

There have been no standards of quality set up by any government agency for fresh fish. The following rules may be helpful.

1. The eyes should be bright, clear and firm, not clouded or sunken.
2. The flesh should be firm and elastic.
3. The gills should be bright and fresh in color, rather than grey.
4. The scales should not be loose; they should cling firmly to the skin, and have a characteristic sheen.
5. The odor should be fresh, never tainted or stale. If there is even a suspicion of taint, the fish should not be purchased.

Lobsters, clams, crabs and oysters should be cooked alive. The eyes of live lobsters and crabs are bright; the shells of live oysters and clams are tightly closed all around.

Shrimps are sold fresh without their heads, and have a pearly grey color until cooked. If they are purchased raw, they should be cooked without delay.

FLOUR

With many foods rationed, and others hard to get, the average person in this country supplies over one-fourth of his energy requirements with some form of flour. Because it provides an especially cheap source of energy, persons of low income use far more flour than average.

Whole wheat contains valuable vitamins and minerals that are removed in the ordinary refining process used to make white flour. "Enriched" flour contains some of these vitamins and minerals in amounts established by regulations set by the Federal Food and Drug Administration. Present regulations require thiamin (vitamin B₁), niacin (nicotinic acid), riboflavin (vitamin B₂) and iron to be present if flour is labeled "enriched."

Flour is classified into three types, according to the use for which it is best suited.

Bread flour, which is rich in protein, is seldom used for home baking today.

Cake flour is milled from soft winter wheat with considerably lower protein content, and is softer and finer in texture. It is used in homes where much baking is done. Cake flour is ideal for pastries, cookies, biscuits, piecrust and baking powder cakes, but won't do for baking that requires a tougher, stronger dough.

All-purpose or family flour, which is a compromise in protein strength between bread and cake flour, takes the place of both in many households.

Self-rising cake flours have baking powder added. They do a satisfactory job, but they do not keep well; they are an expensive way of buying baking powder.

Pancake flours are a blend of several cereal flours (blending helps to avoid "raw" or doughy cakes) plus soda, calcium phosphate, salt, sugar and generally, powdered sweet skim milk. Only milk or water need be added to make a batter. There are two types of pancake flour in general use, the white pancake mixture and the buckwheat type.

Where it could be obtained, the price for a 24½-lb. bag is given in the ratings. Some brands have discontinued this size. Most distributors have curtailed the number of sizes of packages they offer, and some brands are available in one size only.

The flours were tested to determine protein content, moisture, ash, color, absorption, loaf volume and dough or batter quality. "Short" in the ratings refers to a flour which gives high loaf volume and large yield; "plastic" refers to good kneading quality. Actual baking tests were the most important consideration in rating.

From the *Reports*, September 1942.

(Continued next page)

ALL-PURPOSE FLOURS

BEST BUYS

The following brands were judged to offer the best values.

Harvest Day (Kroger, Grocery & Baking Co.). Bleached, enriched, calcium phosphate added. 6 lb., 27¢; cost per lb. 4.5¢; 24½ lb., 89¢. Excellent, flaky dough.

Sunnyfield (A&P). Not bleached, enriched. 3½ lb., 16¢; cost per lb., 4.6¢. 24½ lb., 85¢. Very good, spongy dough.

Blue Jewel (Jewel Food Stores). Bleached, enriched. 5 lb., 23¢; cost per lb., 4.6¢. 24½ lb., 89¢. Very good, spongy, springy dough.

Co-op (Eastern Cooperative Wholesale). Unbleached, enriched. 5 lb., 24¢; cost per lb., 4.8¢. Very good dough, short, plastic, flaky. Good cake quality.

Ecco (Economy Grocery Stores). Bleached, enriched. 5 lb., 16¢; cost per lb., 3.2¢. Good, springy dough, quite strong. Best for bread and yeast-leavened cake.

Bohack's loose bag (H. C. Bohack Co.). 1¼ lb., 5¢; cost per lb., 4¢. 24½ lb., 79¢. Good, spongy dough.

Finast (First National Stores). Bleached. 5 lb., 21¢; cost per lb., 4.2¢. 24½ lbs., 93¢. Good, strong dough.

ACCEPTABLE

(In order of increasing cost per lb., but see comments)

Ecco (see "Best Buys").

Bohack's loose bag (see "Best Buys").

Finast (see "Best Buys").

Harvest Day (see "Best Buys").

Crescent (P. H. Butler Co.). Bleached. 5 lb., 23¢; cost per lb., 4.6¢. 24½ lb., 85¢. Fair, spongy, strong dough.

Sunnyfield (see "Best Buys").

Blue Jewel (see "Best Buys").

Co-op (see "Best Buys").

Mystic (International Milling Co.). Bleached. 5 lb., 25¢; cost per lb., 5¢. 24½ lb., 97¢. Very good spongy, springy dough.

Radio (Thomas Roulston, Inc.). Unbleached. 3½ lb., 18¢; cost per lb., 5.1¢. 24½ lb., 85¢. Good, spongy dough.

Gold Seal (American Stores). Bleached: enriched. 3½ lb., 19¢; cost per lb. 5.4¢. 24½ lb., 95¢. Good dough, very strong.

ACCEPTABLE—CONT'D

Ceresota (Standard Milling Co.). Unbleached, enriched. 5 lb., 27¢; cost per lb., 5.4¢. 24½ lb., \$1.10. Good dough, strong, springy. Best for bread and yeast cake.

Gold Medal (General Mills, Inc.). Unbleached, enriched. 1¼ lb., 7¢; cost per lb., 5.6¢. 24½ lb., \$1.17. Good dough, fairly strong.

Kitchen Craft (Famous Flours, Inc.). Unbleached, enriched. 3½ lb., 20¢; cost per lb. 5.7¢. Good, strong, spongy dough.

Red & White (Red & White Corp.). Bleached, enriched. 5 lb., 30¢; cost per lb., 6¢. 24½ lb., \$1.15. Good, strong dough.

Lily White (Macy's, NYC). 3½ lb., 22¢; cost per lb. 6.3¢. 24½ lb., \$1.22. Good dough, very strong. Best for bread and yeast-leavened cake.

Vim (Vim Flour Mills). Unbleached; wheat germ enriched. 1¼ lb., 8¢; cost per lb., 6.4¢. Good, strong dough.

Hazel (National Tea Co.). Bleached. 2 lb., 13¢; cost per lb., 6.5¢. 24½ lb., 85¢. Good, strong dough. Best for bread and yeast-leavened cake.

Royal Scarlet (R. C. Williams & Co.). 3½ lb., 25¢; cost per lb., 7.1¢. Good, spongy dough.

Pillsbury's Best (Pillsbury Flour Mills). Unbleached, enriched. 1¼ lb., 10¢; cost per lb., 8¢. 24½ lb., \$1.17. Good, strong dough.

Krasdale (A. Krasne, Inc.). Unbleached. 1¼ lb., 10¢; cost per lb., 8¢. Excellent, spongy dough.

Pocono (Grand Union Co.). Bleached. 1¼ lb., 11¢; cost per lb., 8.8¢. 24½ lb. \$1.15. Good dough, firm, plastic, flaky.

Hecker's Superlative (Standard Milling Co.). Unbleached, enriched. 1¼ lb., 12¢; cost per lb., 9.6¢. 24½ lb., \$1.17. Good, strong dough.

CAKE FLOURS

BEST BUYS

The following brands of the "Acceptable" list were judged to offer the best value for the money.

Co-op (Eastern Cooperative Wholesale). Unbleached, enriched. 5 lb., 30¢; cost per lb., 6¢. Very good dough, firm, plastic, flaky.

(Continued next page)

BEST BUYS—CONT'D

Hazel (National Tea Co.). Bleached. 3 lb., 15¢; cost per lb., 5¢. Good dough, stiff, plastic, flaky.

White Spray (First National Stores). Bleached. 2½ lb., 15¢; cost per lb., 5.5¢. Very good dough, short, plastic, flaky.

Gold Seal (American Stores). Bleached. 2½ lb., 16¢; cost per lb., 5.8¢. Excellent dough, short, plastic, flaky.

ACCEPTABLE

(In order of increasing cost per lb., but see comments)

Hazel (see "Best Buys").

White Spray (see "Best Buys").

Gold Seal (see "Best Buys").

Co-op (see "Best Buys").

Sunnyfield (A&P). Bleached. 2½ lb., 17¢; cost per lb., 6.2¢. Excellent dough, short, plastic, flaky.

Island Manor (H. C. Bohack Co.). Bleached. 2½ lb., 17¢; cost per lb., 6.2¢. Good dough, firm, plastic, flaky.

Country Club (Kroger Grocery & Baking Co.). Bleached. 2½ lb., 17¢; cost per lb., 6.2¢. Very good dough, short, plastic, flaky.

Freshbake (Grand Union Co.). Bleached. 2½ lb., 19¢ cost per lb., 6.9¢. Very good dough, short, plastic, flaky.

Ecco (Economy Grocery Stores). Bleached. 2½ lb., 25¢; cost per lb., 9.1¢. Excellent dough, short, plastic, flaky.

Sno Sheen (Pillsbury Flour Mills). Bleached. 2½ lb., 25¢; cost per lb., 9.1¢. Good dough, firm, plastic, flaky.

Softasilk (General Mills). Bleached. 2½ lb., 27¢; cost per lb., 9.8¢. Very good dough, firm, plastic, flaky.

Swans Down (Ingleheart Bros.). Bleached. 2½ lb., 29¢; cost per lb., 10.5¢. Good dough, stiff, plastic, flaky.

Presto (Hecker Products Corp.). Bleached. Self-rising. 1¼ lb., 15¢; cost per lb., 12¢. Very good dough, short, plastic, flaky. (See comment in article on self-rising flours.)

NOT ACCEPTABLE

Red & White (Red & White Corp.). Bleached. 2½ lb., 26¢; cost per lb., 9.5¢. Protein content too high for good cake flour.

PANCAKE FLOURS—READY MIXED

• BUCKWHEAT TYPE

BEST BUYS

The following brands of the "Acceptable" list were judged to offer the best value for the money.

Sunnyfield (A&P). Buckwheat, wheat, corn. $1\frac{1}{4}$ lb., 7¢; cost per lb., 5.6¢. Good batter and flavor; baked well.

Harvest Time (Pillsbury Flour Mills). Buckwheat, wheat, corn, 4 lb., 24¢; cost per lb., 6¢. Batter thick, good. Medium dark cakes, very good rise, excellent flavor.

ACCEPTABLE

(In order of increasing cost per lb., but see comments)

Sunnyfield (see "Best Buys").

Harvest Time (see "Best Buys").

Hazel (National Tea Co.). Buckwheat, wheat, corn. $1\frac{1}{4}$ lb., 9¢; cost per lb., 7.2¢. Good batter and flavor; baked well.

Co-op (Co-operative Mills, Inc.). Buckwheat, wheat. 2 lb., 15¢; cost per lb., 7.5¢. Good batter and flavor; baked well.

Red & White (Red & White Corp.). Buckwheat, wheat, corn. $1\frac{1}{4}$ lb., 10¢; cost per lb., 8¢. Good batter, wheaty flavor; baked well.

Aunt Jemima (Quaker Oats Co.). Buckwheat, wheat, corn. $1\frac{1}{4}$ lb., 15¢; cost per lb., 12¢. Good batter and flavor; baked very well.

Pillsbury's (Pillsbury Flour Mills). Buckwheat, wheat, corn. $1\frac{1}{4}$ lb., 13¢; cost per lb., 10.4¢. Good batter and flavor; baked very well.

White Spray (First National Stores). Buckwheat, wheat. $1\frac{1}{4}$ lb., 15¢; cost per lb., 12¢. Good batter and flavor; baked very well.

NOT ACCEPTABLE

Asco (American Stores). Buckwheat, wheat, corn, $1\frac{1}{4}$ lb., 7¢; cost per lb., 5.6¢. Batter fair, bakenings coarse in texture, tough; protein content too high.

• WHITE PANCAKE MIXTURES

BEST BUYS

The following brands of the "Acceptable" list were judged to offer the best value for the money.

Asco (American Stores). Wheat, corn, rice, rye. $1\frac{1}{4}$ lb.,

(Continued next page)

BEST BUYS—CONT'D

5¢; cost per lb., 4¢. Good batter and flavor; baked well; good waffle flour.

Sunnyfield (A&P). Wheat, corn, rice, rye. 1½ lb., 5¢; cost per lb., 4¢. Good batter and flavor; baked very well; rather high protein.

Harvest Time (Pillsbury Flour Mills). Wheat, corn, rice. 3 lb., 14¢; cost per lb., 4.7¢. Good batter; dark cream color, good rise, very good flavor.

Freshpak (Grand Union Co.). Wheat, corn, rice, rye. 1½ lb., 6¢; cost per lb., 4.8¢. Very good batter, good flavor; baked very well.

Country Club (Kroger Grocery & Baking Co.). Wheat, corn, rice, rye. 1½ lb., 6¢; cost per lb., 4.8¢. Good batter and flavor; baked very well.

ACCEPTABLE

(In order of increasing cost per lb., but see comments)

Asco (see "Best Buys").

Sunnyfield (see "Best Buys").

Harvest Time (see "Best Buys").

Freshpak (see "Best Buys").

Country Club (see "Best Buys").

Hazel (National Tea Co.). Wheat, corn, rice, rye. 1½ lb., 7¢; cost per lb., 5.6¢. Very good batter, good flavor; baked very well.

Victor (Crete Mills). Wheat, corn, rice. Cost per lb., 6¢. Good batter and flavor; baked well.

Island Manor (H. C. Bohack Co.). Wheat, corn, rice. 1½ lb., 10¢; cost per lb., 8¢. Good batter and flavor; good waffle flour.

Aunt Jemima (Quaker Oats Co.). Wheat, corn, rice, rye. 1½ lb., 11¢; cost per lb., 8.8¢. Good batter and flavor; baked very well.

Pillsbury's (Pillsbury Flour Mills). Wheat, corn, rice, rye. 1½ lb., 12¢; cost per lb., 9.6¢. Light batter, good flavor; baked very well; good waffle batter.

The following flours, though "Acceptable," did not compare with the above in quality.

White Spray (First National Stores). Corn, wheat. 1½ lb., 5¢; cost per lb., 4¢. Very light batter, somewhat doughy.

Co-op (Midland Co-operative Wholesale). Wheat, corn, rye. 3½ lb., 21¢; cost per lb., 6¢. Batter thin, fair; made

cream yellow pancakes, average rise, good flavor.
Red & White (Red & White Corp.). Wheat, corn, rice.
1½ lb., 10¢; cost per lb., 8¢. Fair batter, somewhat
tough.

FRESH FRUITS AND VEGETABLES

In buying fresh fruits and vegetables, study the market. Daily broadcasts or newspaper items in many large cities tell which fruits and vegetables are in season and which are the best buys. By keeping track of seasons and the produce coming from nearby areas, you can keep down your fruit and vegetable budget and still have variety throughout the year.

Here are some suggestions for buying fresh fruits and vegetables:

1. Make your own selection. While canned and packaged goods can safely be ordered by phone, personal inspection is necessary to ensure getting good quality in perishable foods.
2. Avoid unnecessary handling. Rough handling increases spoilage, for which the consumer must ultimately pay.
3. Purchase by weight whenever possible. Remember that the largest is not necessarily the best quality, nor does it suit every purpose.
4. Buy the quantity that will be most economical. Some fruits and vegetables must be used immediately. Others can be kept for long periods, with or without refrigeration. If you have storage space, you can make great savings by buying these in quantity.
5. Make sure that containers hold full measure. Many fruits and vegetables not sold by weight are packed loosely, or in containers of deceptive sizes and shapes. Look beneath the surface. The top layer may look fine, while the pieces beneath are of poor quality.

FRESH FRUITS

Apples. Season: one type or another can be obtained throughout the whole year. There are about 500 varieties on the market.

Favorite cooking apples have a slightly tart taste

(Continued next page)

(**Wealthy**, **Jonathan**, **Willow Twig** and **Rome Beauty**). **Grimes Golden**, **Delicious**, and **Stayman Winesap** are excellent dessert apples. Avoid soft, mealy, overripe, tough-skinned apples, or those with bruised or browned surfaces. Best buys are those of medium size, rather than very small or very large ones.

Apricots. Season: June through August. Should be plump, fairly firm, uniformly golden-yellow in color. Greenish-yellow apricots are unripe and lack flavor. Shrunken or shriveled fruit has been stored too long, and usually tastes insipid. Avoid mushy or bruised apricots as they deteriorate rapidly.

Bananas. Season: all year (to the extent that shipping permits). For eating, select yellow fruit with brown flecks. For cooking, solid yellow, or yellow with green tips is satisfactory. Slightly green fruit ripens in a few days at room temperature. Bruised bananas, those with badly discolored skin, or ones showing mold on the darkened portions are poor buys.

Blackberries, **Dewberries**, **Loganberries**, **Raspberries**. Seasons vary locally. Plump berries, bright, clean and fresh in appearance, with solid, full color are best. Dull color, softness and leakiness indicate that berries are overripe. Berries with caps attached are generally immature. Examine bottom layers of the containers before buying to make sure that quality is uniform throughout.

Blueberries, **Huckleberries**. Season: June, July. Look for ripe fruit, uniform in size, with firm, fresh color. Avoid shriveled, soft, watery or moldy fruit.

Cherries. Season: May through August. Should be plump, firm, and well-colored for the variety. Stale cherries are dull, shriveled, sticky and leaky. Break open one or two cherries before buying, for worminess usually runs in lots.

Cranberries. Season: Fall through Winter. Select shiny, firm, plump berries. The small dark ones are likely to be sweeter than the large, bright red type. Moist cranberries are not necessarily bad, but avoid ones which are sticky, leathery or tough, with discolored flecks.

Grapefruit. Season: October to May. Grapefruit which is heavy for its size is usually more juicy and

thinner skinned than lightweight grapefruit. Flesh should be firm and springy, rather than wilted or flabby. Russetting (reddish-brown coloring on the skin) and surface defects like scratches, scale, scars, or thorns affect appearance but not eating quality; such fruit may often sell at a lower price. Avoid fruit with decayed areas which often appear at the stem end of the fruit. Fruit pointed at the stem end is likely to be thick skinned, and a poor buy.

Grapes. Season: July to December. There are two types, the thin-skinned Western or European (Emperor, Flame, Tokay, Malaga, Thompson Seedless) and the Eastern or American (Catawba, Delaware, Concord, Niagara), which are thick-skinned, and in which the skin separates readily from the pulp. Western grapes are best for eating; Eastern ones are much used for home made jelly, juice and wine.

Fresh, plump grapes, firmly attached to the stems, are best. The stem end of the grape should not show signs of decay or mold, and the stems should not be dry or brittle. Avoid grapes which are sticky or leaky.

Most white or green grapes are best for eating when they are turning to amber color, although the seedless variety is ripe when green. For making jelly, select grapes which are not quite ripe; grapes for juice should be mature, and those used for wine should be somewhat overripe.

Lemons: Season: all year. Look for lemons heavy for their size, with fine-textured skin. Deep yellow colored lemons give more juice, are often less tart. Shriveled, hard-skinned, soft or spongy fruit is poor; discoloration at the stem end indicates decay.

Melons. Season: May through October. (Casaba, cantaloupe, honeydew, honey ball, Persian, watermelon.) For melons other than watermelon, full color and distinctive, characteristic odor are indications of ripeness. If the blossom end smells sweet and is soft when pressed gently, the melon is usually ripe.

The netting on the rind of a good cantaloupe is coarse, and stands out. If the scar on the stem end of the melon is sunken and calloused, the melon was picked when ripe, rather than ripened in storage, and should be of superior quality. Thin netting indicates

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that the melon is not sweet.

Large watermelons are generally superior to small ones, and have a much higher proportion of flesh to rind. A ripe watermelon has rich green color, except on the underside, where it is yellow (not pale green). The most certain test for ripeness is removal and examination of a "plug," which should be crisp, free from fibers, and ripe, not dry or mealy. The chief watermelon season is July through September in most states.

Oranges. Season: all year. Firm, heavy oranges with fine-textured skins are best. Surface blemishes do not affect quality. Different varieties, from various parts of the country, are in season at different times of the year. For economical buying, shift from one variety to another as the season changes. Color in oranges is no indication of ripeness, since practically all on the market are artificially colored, either through use of ethylene gas, or by dyeing.

Peaches. Season: June through September. Both yellow and white varieties are grown as freestone and cling. Freestone is most popular for home use; clings are generally canned commercially. White fleshed peaches, when ripe, have lost the green color characteristic of unripeness, and have some red "blush." The fruit is firm, but not hard. Overmature or soft peaches are good only for immediate consumption. Bruised fruit is wasteful and undesirable. Worm injury can frequently be detected by the uneven form of the peach, and from small punctures through which gum exudes. Decay in peaches, shown by brown spots, spreads very rapidly, often causing complete loss of the fruit.

Pears. Season: July through November. Should be fairly firm, but not hard. Color of ripe fruit depends on the variety. Pears slightly soft at the base of the stem are mature and satisfactory for immediate consumption, but cannot be stored. Superficial discoloration, caused by "scald," does not affect flavor.

Plums and Prunes. Season: June through September. Color is no indication of ripeness unless one is familiar with varieties. Plums and prunes of good quality are plump, fresh-looking, full-colored, and soft enough to yield to pressure. Hard or shriveled fruit is immature;

soft, leaky fruit is generally over-ripe.

Strawberries. Season: Most plentiful in Spring. Should look fresh, bright, solid red. Size is no indication of quality, although large berries are generally higher priced. The cap should be attached to the fruit; capless and leaky berries are usually over-ripe. Presence of mold indicates decay. Look underneath the top layer in the container, to check uniformity of quality.

FRESH VEGETABLES

Asparagus. Leaves at the head of the stalk should be tightly folded. If the bottoms are dry or the stalks have holes running along their length, the asparagus is not fresh. Fresh asparagus is quite pliant, and breaks with a snap.

String Beans. Pods should be silky and flat, so that the beans inside hardly show. They should break with a crisp snap. Ridged, swollen, shriveled or wilted pods are not fresh.

Beets. Beet roots should be red throughout. If they are purchased in bunches, get beets with fresh, green, leafy tops, which can be used as greens. Medium-sized ones with smooth skins are the best buys. Too large, rough, ridged, or scarred beets are apt to be tough.

Broccoli. A good bunch should not contain an excessive amount of coarse leaves, stems, or flowers from side branches. Make sure that you get the center heads, which should be compact and green, with no yellow tint, and with crisp, short stems. In old broccoli, the head shows a tendency to spread.

Cabbage. There are four important varieties on the market:

Danish—Firm, compact, light green in color (Winter type).

Domestic—Darker than the Danish. The early type has loose outer leaves.

Red—Much stronger flavor than the other varieties.

Savoy (Curly)—Leaves fluted at edges. Flavor pungent.

Select only crisp, solid, heavy cabbage, without yellow tinted leaves. The veins on the leaves should be solid and white.

Carrots. Young tender carrots are generally bunched,

with the tops left on. The color should be a uniform golden orange, without green at the stem end. Large carrots are apt to be tough. Carrots should not be shriveled nor have "whiskers."

Cauliflower. The heads should be white and solid, surrounded by crisp, green leaves. Avoid spreading flower clusters.

Celery. White, or blanched, celery is generally preferred, but green celery has a higher vitamin content. Celery should be firm. The parallel grooves along the stalks should not be too far apart, and the stalks should be fleshy, not thin or flat. Examine the "heart" to see that it is large, and free of bleach rot (a brownish, moist condition).

Corn. Good mature, sweet corn should have fresh, green husks, and silk that ranges from golden to dark brown. Field corn, of inferior flavor, can be recognized by the fact that there is little if any silk visible.

Cucumbers. The best ones are dark green, with no yellowish tinge. They should be firm, young, spiny, comparatively slender, and from six to eight inches in length. Avoid cucumbers which are spongy or soft.

Lettuce. The New York (iceberg) variety should be solid, and pea green or lighter in color. If the outside leaves are wilted or rusty, there is considerable waste. Boston lettuce has a softer head than iceberg. Romaine lettuce has coarse, elongated leaves. Lettuce should be crisp, and the heads should be firm.

Lima Beans. Fresh lima beans are better when bought in the pod than when shelled. The pods should be dark green, plump and well-filled. Old beans, usually tough and of poor flavor, may be recognized by shrunken, flabby, or yellowish pods.

Mushrooms. Fresh mushrooms have a white or creamy color. They are firm to the touch, without being either dry or rubbery. The veil on the under side should be unbroken, and should have a pinkish color. Spotting of the mushrooms is indicative of decay. The short stemmed type is generally the best (and most expensive), but the long stemmed variety is satisfactory for creaming and for soups.

Onions (dry). There are many varieties of onions; those with yellow skin are most widely used. In appearance they should be thin necked, dry skinned, and firm

fleshed, and there should be no indication of sprouting.

Peas. Look for bright green pods, full and brittle. The peas should be well shaped, firm and unsprouted. Remember that a pound of peas, as purchased, may yield as little as $\frac{1}{4}$ pound of shelled peas.

Potatoes. Look for uniformity in size and shape. If there are many deep eyes present, waste will result. The color of the cut surface should be creamy yellow; a deep yellow potato is not likely to cook well. Potatoes should be sound, smooth and firm; not knobby, scabby, or misshapen.

Sweet Potatoes. These should be smooth, plump and chunky, tapering at both ends. Avoid excessively large ones or those to which rootlets are attached.

Spinach. There are two varieties, crinkly and flat. In either, the leaves should be a deep uniform green, and reasonably free from sand. Poor quality spinach may have yellow or withered leaves and woody stalks, and may also contain weeds.

Tomatoes. Select tomatoes which are firm, solid, and free from deep grooves. When cut, the seed and the flesh portions should hold together as a firm mass. Avoid excessively large tomatoes, or those which are misshapen, ribbed, scarred, yellow, or wrinkled.

FROZEN FOODS

Frozen foods are specially processed by rapid freezing and stored at temperatures near 0°F. (Do not confuse them with cold storage foods.) The best frozen foods are about as good in flavor, appearance and nutritive value as fresh foods. Frozen vegetables are more convenient to prepare than fresh ones. Frozen foods also have better vitamin-retention, color and flavor than canned goods, and at present some frozen foods are less expensive than the canned variety. However, in general, they cost more than either canned food or fresh food in season.

Frozen Vegetables: Peas and corn are better than the fresh products unless the latter are fresh picked. String beans, lima beans and spinach, when cooked, are almost indistinguishable from the fresh products. Cauliflower is satisfactory. Green beans are generally good if tender beans, free from fibrous tissues, were selected for freezing. Asparagus may collapse badly on thawing, but after cooking it compares favorably in appearance and flavor with cooked fresh asparagus. Vegetables usually eaten

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raw, such as lettuce, tomatoes, cucumbers and onions, do not freeze well.

Frozen Fruits: Nearly all frozen fruits now on the market are good in quality.

Frozen Meats: Generally good, although in most cases fresh meat is likely to be a better buy.

Frozen Poultry: Generally good, far superior to "cold storage."

Frozen Fish: Generally very good. Once unfrozen it spoils rapidly.

A recently-developed system of small-scale community freezing of foods has worked out very successfully in many communities. Inquire to see whether such facilities are available in your community.

From the *Reports*, January 1940 and August 1941.

HONEY

Honey can be classified into two main types: *extracted honey* (frequently called strained honey), and *comb honey* (sometimes called section honey).

Extracted Honey sometimes crystallizes. This can be reliquefied simply by immersing the container in water and heating it until the honey is completely liquid. Be careful to keep the water under the boiling point and remove the honey as soon as it is liquid.

Honey is graded on the basis of color, flavor, density and aroma. Natural colors range from water white through white, light amber, dark amber to very dark brown. Generally, the lighter-colored honeys are milder in flavor and smoother to taste.

Taste also varies greatly and ranges from a mild, delicate flavor (clover or white sage honey) to a strong flavor (buckwheat honey) or even a disagreeable flavor.

F & D A standards require that No. 1 honey be well ripened, well strained, shall weigh not less than 11 pounds, 12 ounces to the gallon, at a temperature of 60 degrees Fahrenheit. Its color should be such that it can be graded white or amber. It shall not have been contaminated by dirt or other foreign material, nor may its flavor be affected by fermentation, overheating, or by chemical flavoring.

Comb Honey contains all of the volatile bodies which make up its flavor and aroma. For this reason, comb honey has generally a superior flavor. It costs more than

extracted honey, however. Like extracted honey, comb honey is—or should be—graded.

Unless kept under the most ideal conditions, comb honey cannot be kept liquid from one year to another. Although well-ripened honey will not spoil with age, it will crystallize. The consumer can determine the condition of the honey in the comb by holding the comb against a strong light. If the light penetrates, the honey is liquid.

Honey can often be substituted for other types of sweeteners to good advantage. Baked bread, cakes, and pastries made with honey will remain fresh and wholesome for a longer period than otherwise. Many like the flavor of honey with grapefruit, stewed fruits and French toast.

From the *Reports*, August 1943.

MAYONNAISE AND SALAD DRESSINGS

By Federal definition, mayonnaise must contain at least 50% vegetable oil, mixed with vinegar and a small amount of egg yolk or whole egg. Small amounts of salt, sugar and spices are sometimes added, and lemon juice is occasionally used in place of or in addition to the vinegar. "Salad dressings" contain less vegetable oil and often less egg; starch fillers, higher vinegar content and often water are included to make up the deficiency. Consequently, the caloric value of salad dressing is about two-thirds that of mayonnaise.

Mayonnaise and salad dressing should be kept in the refrigerator to prevent spoilage, but they should not be kept next to the ice compartment, since freezing destroys the emulsion. If the oil separates, the product can be re-emulsified by beating up a pint of it, a little at a time, with one egg yolk. Keep these foods covered to prevent evaporation of the vinegar. Discard them if they develop a bad or rancid taste or odor, or if the cover bulges or "pops" when opened.

Supplies of mayonnaise are short, and it is often hard to get. Many people are turning to home-made mayonnaise, which is easy to prepare, cheap and can be made to taste-order from vegetable oils, eggs, vinegar and spices.

MEAT

Many people have had to make considerable reduction in their meat consumption in the past year, but despite

severe ration restrictions, there is still sufficient meat to meet nutritional needs, provided care is taken to round out the rest of the diet. The important thing is to plan meals with care.

There are two simple ways to "stretch" your meat ration. The first amounts to "meatless" days, on which cheese, fish or fowl is substituted for the meat dish. The other is to make use of ration-cheap meat cuts.

Some of the little-used low-ration meat sundries can be used for excellent and inexpensive meat dishes. Liver and kidney are particularly rich in protein, iron, vitamin A and the B complex vitamins. Heart and brains are also good sources of protein and the B vitamins. Lungs, melts and sweetbreads can be made into attractive dishes of excellent nutritional value.

In planning menus, remember that the less expensive meat cuts are just as rich in food value as the costly ones. Here are a few suggestions for economizing:

Concentrate on appetizing stews and pot roasts, for which you can use cheaper meat cuts. (**Beef**: shank, plate, brisket and neck for stew; chuck and heel of round for pot roast. **Veal**: heel, neck, breast, foreshank for fricassee; heel for pot roast. **Lamb**: neck, shank, breast and flank for stew; leg and square chuck for roast. **Pork**: spareribs and neck bones for baking; loin butts or fresh ham for roasting.) If you have a pressure cooker, cheap soup meats can quickly and easily be converted into delicious and tender pot roasts.

A number of publications are available which will help you make your meat dollar go farther.¹

The best insurance that you're getting the quality of meat you pay for is to buy Government graded meat.

There are two sets of standards for grading meat. According to the older one, established by the Department of Agriculture, the best grade is Prime, followed by Choice, Good, Commercial and Utility. Such grading is carried out under the supervision of an Agriculture Department inspector, and can be recognized by the ribbon

¹ "Meat Dishes at Low Cost." *U. S. Dep't of Agriculture, Misc. Publication No. 216*. 5¢. For sale by Sup't of Documents, Washington, D. C.

"More Strength to Your Meat Dollar." *Consumers Guide*, Oct. 15, 1940. 5¢. For sale by Sup't of Documents, Washington, D. C.

"Cooking and Canning Meats." *Circular 137*. Free. North Dakota Agricultural College Extension Service, Fargo, N. D.

grading stamp which runs the entire length of the carcass, so that each cut will bear the grade mark.

Prime meat is rarely found in the shops, and only a small portion of the meat that reaches the market is Choice. About half is Good or Medium. Most persons find meat graded "Good" satisfactory. The better grades are more tender, but all grades are equally nutritious.

OPA has set up another set of grades as part of its scheme for controlling meat prices. OPA's AA grade corresponds to "Choice" meat; lower grades are A, B and C, respectively. The OPA grade mark is a single half-inch stamp on each wholesale cut. So far, government supervision is required by OPA only for the grading of AA meat. However, since the supervision is by Department of Agriculture Inspectors, many packers find it simpler to have the inspector grade all their meat with the ribbon grading stamp while he is in their plant.

Most meat sold today bears the round purple stamp, "U. S. INSP'D AND P'S'D." This is not an assurance of quality, but simply a guarantee that the carcass was subjected to sanitary inspection.

The following information will help you select good quality:

Beef: The exposed surface of good beef should be cherry red, and firm and fine-grained in texture, with little visible connective tissue. The bones should be pinkish white and porous. If the animal is old or its meat poor, the bones are flinty and white, the flesh soft, dark, and coarse-grained.

The fat should be evenly distributed over the outer surfaces of the cuts, and should be brittle, creamy white, and flaky. There should also be fat between the muscles, and along the connective tissue. A fine network of fat (marbling) should appear throughout the meat.

Veal: Good-quality veal should have flesh that is light pink, firm, moist, and fine-grained. Lighter meat is generally more tender. The fat, which should be white and smooth and not brittle, should be in a thin layer over the exterior of the meat. Within the meat, the fat should be pink. Veal, unlike beef, shows no marbling. Bones should be red, and soft enough to be sawed or cut easily without splintering.

Lamb and Mutton: Lamb has pink flesh, which be-

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comes dull red when it reaches the mutton stage. The fat of the young lamb is pink, but becomes white as the animal grows older. Bones are soft and red in young animals, hard and white in older ones. Other characteristics are the same as those which indicate good quality in other meats.

Pork: You are not likely to find extremes of very good or very poor quality pork. The flesh should be firm and well marbled, and the color grayish pink. Hams should be short and plump; their skins smooth, thin, and free from hair pores. Plump, well proportioned pieces are the best quality. The grades of pork are No. 1 (best), No. 2, and No. 3.

Pork is frequently infested with the parasites (*trichinæ*) which cause the disease called trichinosis. *Trichinæ* can be killed in two ways: refrigeration at 5° Fahrenheit for 20 days, or thorough heating. The U. S. Department of Agriculture requires all packers who ship meat in interstate commerce to use the refrigeration process for pork products which are customarily eaten without further cooking. Such products include frankfurters, bologna, Vienna sausage, Summer sausage, cooked ham, and Italian style ham. But plants shipping from state to state represent only about 70% of the country's meat output, and the refrigeration requirement does not extend, even in those plants, to pork products which are customarily cooked.

The only protection, until there is adequate protective legislation, is to cook all pork products thoroughly. There should never be any pink tinge to properly cooked pork; it should be cooked until it is white clear through.

MILK

Unpasteurized milk, even if it is "certified," should not be relied on as safe to drink. (See the *Reports*, June 1942, for a discussion of brucellosis, a disease carried by raw milk products.) Since most of the milk supplied to consumers in the larger cities has been pasteurized, the occurrence of milk-borne diseases has been cut down considerably.

There is no universal system of milk classification throughout the country. Though some large cities still employ the two-grade system, based on bacterial counts, modern distributing and processing methods have rendered it obsolete, and the tendency is toward a safe single-grade milk.

In many communities where there is but one grade, milk is sold at different price levels depending on percentage of butterfat content. Before deciding which type of milk to buy, remember that one-tenth of one per cent butterfat amounts to about a thirtieth of an ounce of butter per quart, and that this quantity costs only a small fraction of a cent in terms of butter prices.

Homogenized milk, which is sold at a premium, is simply milk in which the butterfat globules have been broken up and distributed evenly throughout the milk, so that there is no "cream line." There is no evidence that homogenized milk is any more nutritious or digestible for adults than ordinary milk. And for infants, evaporated milk (which is also homogenized) in proper dilution is much cheaper and just as good.

Skim milk is fresh milk with only the butterfat removed. Skim milk sells, in many places, for much less than whole milk, though the price varies greatly from city to city. It retains the bulk of milk's nutritive value in the form of minerals (calcium and phosphorus), the B vitamins and proteins, but lacks the vitamin A content of butterfat. Where skim milk sells for several cents a quart less than whole milk, many families should find it worth while to buy more milk in the form of skim milk.

Dry skim milk, available in some localities for 20¢ to 25¢ a pound, is also a satisfactory and very inexpensive form of milk solids. Its greatest use is in cooking. Since one pound of dry skim milk can be diluted with water to make about five quarts of milk, this is generally the cheapest way to buy milk. If you cannot purchase dry skim milk at your grocer's (many cooperatives sell it), you may be able to buy it at a bakery.

Evaporated milk is ordinary milk from which about half of the water has been removed. Its composition is regulated by Federal standards. Diluted with an equal amount of water, evaporated milk is entirely comparable to fresh milk in food value, except for its lower vitamin C content. But this is unimportant, since even fresh milk is a poor source of vitamin C.

The price of evaporated milk is generally lower than that of fresh milk (it costs about 11¢ a quart, November 1943, plus a meat-ration point). For those who find the flavor objectionable, it can be masked by flavorings.

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Evaporated milk should always be used if fresh pasteurized milk is not available.

Much of the evaporated milk now on the market is "irradiated" or otherwise treated to increase its vitamin D value. Studies indicate that although the amount of vitamin D contained in such enriched milk is not enough to prevent or cure rickets in all cases, it makes a valuable contribution.

Sweetened condensed milk is somewhat more concentrated in solids content than is evaporated milk, and also contains large quantities of sucrose (cane or beet sugar) or dextrose (corn sugar). Except where the sugar is necessary for sweetening (icings, ice cream, etc.), evaporated milk is preferable.

For further information on milk, see the *Reports*, April and November 1939; February and June 1940; May and November 1941; June 1942.

PEANUT BUTTER

Of first rank among low-cost highly nutritious foods is peanut butter. It is a rich source of proteins as well as carbohydrates. Its oil — about 50% of the finished product — contains about 20% linoleic acid, a fat essential to good nutrition. It also has substantial amounts of calcium, phosphorus and iron and the vitamins B₁ (thiamin), riboflavin and niacin.

Peanut butter is prepared by grinding mature, roasted peanut kernels. Salt and sometimes sugar are added to the ground product, which is then packaged.

Most manufacturers buy shelled peanuts and do their own roasting before grinding. Both grade and type of peanut used is important. Poor grade peanuts may yield butter of poor color, odor and flavor, which may be unfit to eat. "Virginia" type peanuts, containing about 40% oil, tend to make too dry a butter. "Spanish" peanuts, with about 50% oil, make the butter too oily. Hence most manufacturers combine the two types in various proportions.

Peanuts must be roasted adequately to be palatable, but roasting them too long or at too high temperatures gives the butter a scorched flavor, and destroys much of the vitamin B₁.

If the skins are not removed completely after roasting, they give the peanut butter a slightly bitter taste and a speckled appearance. If a large amount of the peanut

"hearts" is left with the nuts, they too make the product bitter, and they hasten rancidity.

The nuts may be ground very fine to produce a fairly smooth butter; a little coarser to produce a "grainy" butter; or they may be ground to contain "chunks" or small pieces of unground peanut.

Clean sanitary procedure in blending, grinding and packaging is essential to keep dust and dirt from contaminating the butter.

Peanut butter properly packaged will keep sweet and fresh for a long time, unless a wet spoon or knife is used to serve it or the package is left open or loosely closed. Such handling is apt to turn it rancid.

Sometimes the oil in peanut butter separates and rises to the top of the solid material. This is not a sign of inferior quality. The separated oil should merely be stirred back into the butter before use. Some manufacturers prevent such separation by "homogenization"; by removing the oil, hydrogenating it and recombining it; or by adding small amounts of glycerol.

Peanut butter can be made at home by grinding roasted peanuts in an ordinary meat grinder. Details of roasting, cleaning and grinding may be obtained by writing to the Sup't of Documents, Washington, D. C., for Circular No. 384 of the U. S. Dep't of Agriculture (price, 5¢ in coin).

CU examined 32 brands of peanut butter. Label statements of net contents were checked; none of the brands was found to be short weight. Separation of oil was noted and after thorough mixing the samples were examined for color, odor and flavor. "Defects" such as pieces of skin, discolored or scorched peanuts, sand etc. were determined according to methods given in the U. S. Standards for Grades of Peanut Butter. Excessive defects indicate carelessness in sorting or cleaning the peanuts, or lack of sanitary precautions during the grinding and packing of the peanut butter.

From the *Reports*, June 1943.

BEST BUYS

The following brands were judged to give the best values for the price, in the order given.

Heinz. 1-lb. jar, 35¢. Dark roast. Slightly salty flavor.

Made with hydrogenated peanut oil. Available nationally.

(Continued next page)

BEST BUYS—CONT'D

Dellford. 1-lb. jar, 31¢. Light roast. Available in New York metropolitan area.

Monarch. 1-lb. jar, 39¢. Light roast. Available nationally.

Peter Pan. 13-oz. jar, 29¢; cost per lb., 36¢. Light roast. Slightly salty flavor. Glycerol derivative of peanut oil added. Available nationally.

Come Again (National Tea Co.). 2-lb. jar, 45¢; cost per lb., 22½¢. Light roast. Slightly salty flavor. Available in the Middle West.

ACCEPTABLE

(Listed in estimated order of quality)

Heinz (see "Best Buys").

Skippy Chunk Style. 1-lb. jar, 59¢. Very light roast. Oil hydrogenated. Available nationally.

Monarch (see "Best Buys").

Dellford (see "Best Buys").

Peter Pan (see "Best Buys").

White Rose Vitaminized. 10-oz. jar, 23¢; cost per lb., 37¢. Dark roast. Vitamin D added in ratio 1.5 U.S.P. units per gram of peanut butter. Available nationally.

Come Again (see "Best Buys").

Kroger's Country Club, Peanut Butter Crush. 1-lb. jar, 30¢. Light roast. Available in Middle West.

Hood's. 8-oz. jar, 16¢; cost per lb. 32¢. Light roast. Available in Hood's Creamery stores in Boston area.

Kroger's Embassy. 1-lb. jar, 29¢. Light roast. Available in Middle West.

Finast (First National Stores, Inc.) 2-lb. jar, 49¢; cost per lb., 24½¢. Dark roast. Available in New England and a few other areas.

Armour's Star. 1-lb. jar, 31¢. Light roast. Available nationally.

Beardsley's. 1-lb. jar, 39¢. Dark roast. Available in metropolitan New York and New England.

Skippy Cream. 1-lb. jar, 59¢. Very light roast. Oil hydrogenated.

Jack Sprat. 1-lb. jar, 29¢. Very dark roast. Slightly salty and scorched flavor. Available in Central States.

Frank's Jumbo. 10½-oz. jar, 25¢; cost per lb., 38¢. Light roast. Available nationally.

Beech-Nut. 8-oz. jar, 23¢; cost per lb., 46¢. Dark roast. Available nationally.

Bohack's. 1-lb. jar, 24¢. Very dark roast. Available in Brooklyn and Long Island only in Bohack stores.

Sultana (A & P). 1-lb. jar, 25¢. Dark roast. Slightly scorched flavor. Available nationally.

Slade's. 1-lb. jar, 39¢. Very dark roast. Fair flavor. Available in New England.

Gerbro. 6-oz. jar, 15¢; cost per lb., 40¢. Light roast. Available in the New York metropolitan area.

Peanut Crunch. 1-lb. jar, 35¢. Dark roast. Available nationally.

Premier. 1-lb. jar, 39¢. Light roast. Available East of the Mississippi.

Ann Page (A & P). 1-lb. jar, 27¢. Very dark roast. Scorched odor and flavor. Available nationally.

Asco (American Stores Co.). 1-lb. jar, 27¢. Light roast. Poor odor, fair flavor. Available in stores connected with American Stores Co.

Krasdale. 6-oz. jar, 15¢ cost per lb., 40¢. Very dark roast. Scorched odor and flavor. Available in the New York Metropolitan area.

SUBSTANDARD

The following are rated "Substandard" because of excessive defects.

Co-op (National Co-operatives, Inc.). 8-oz. jar, 16¢; cost per lb., 32¢. 1-lb. jar, 27¢. Not uniform with regard to roast or defects. One jar contained excessive defects. The other jar was "Acceptable."

Diamond. 1-lb. jar, 26¢. Dark roast.

Jane Goode. 1-lb. jar, 35¢. Dark roast.

Royal Scarlet. 1-lb., 8-oz. jar, 35¢; cost per lb., 23¢. Dark roast. Poor odor and flavor.

Savoy. 1-lb. jar, 25¢. Dark roast.

Sweet Life. 1-lb. jar, 29¢. Dark roast. Poor odor and flavor.

POULTRY

Since poultry is not rationed, and contains the same nutrients as rationed meat, it is much used in these days of meat shortage to round out menus. Though it is unrationed, poultry is under OPA price ceilings; pay no more than these prices.

In the purchase of poultry, the following rules may serve as a guide:

1. The breast should be broad and plump; the thigh, back, and bones should be covered with a thick layer of flesh. There should be streaks of fat along the back, breast, and thighs.

2. Young birds have breast bones with flexible tips; they have sharp claws and smooth, soft skin and feet. Older birds have brittle, rough breast bones, coarse skins, and claws which are worn down. Long hairs on the skin are another indication of age.

3. Properly dressed birds have clean skins and feet. No food is present in the crop, and there are practically no pin feathers. There should be no bruises, broken skin or discoloration of the wings and tail.

4. Fowl dressed by dry-picking or slack scalding keeps longer than poultry which has been scalded with very hot water to remove the feathers.

5. The first signs of deterioration in poultry generally appear under the wings. Lift the wings and note whether the odor is sour or rancid, or if there are any signs of stickiness. If any of these are present, decomposition has begun, and the chicken should not be bought.

6. Be particularly wary about buying dressed fowl selling at somewhat less than prevailing market prices. Investigation in New York City has revealed that such poultry is often defective, and even decomposed. When you buy cheap poultry, be sure that the price has not been reduced for these reasons.

There are government grades for fresh-dressed poultry, although the large majority of the poultry sold is not graded. The U. S. grades are as follows: U. S. Special, or Grade AA; U. S. Prime, or Grade A; U. S. Choice, or Grade B; U. S. Commercial, or Grade C. Buy by grade whenever possible, keeping in mind that lower grades should cost less.

Federal health inspection of dressed poultry is not compulsory, but most of the frozen poultry on the market is inspected. Inspection is compulsory in some cities (you can check this with your local health department).

RICE

Whether rice is good in quality or inferior depends on the variety used, its color and the proportion of broken and discolored grains.

Variety: Three types of rice are commonly sold: Hon-

duras, Blue Rose and Japanese. The long thin-grained Honduras rice is considered best. Its grains are fragile, but even with a comparatively high percentage of broken grains, Honduras rice of good quality is superior to slightly broken rice of other varieties. Blue Rose rice, with shorter and broader grains, is the kind most often found. Japanese or California rice, with shorter, broader grains than either of the others, is inferior to both.

Color: "White" rice may vary from white to gray, but the best quality has an even pearly color, free from chalky white spots. Brownish or black discolored spots are evidence of careless processing.

Brown rice is unpolished. It derives its color from its outer coating, which is removed in making white rice. Brown rice is nutritionally superior, because the outer coating is rich in B vitamins and in minerals. Once this is removed, starch is about all that remains.

Broken Grains: A minimum of broken grains is desirable. This factor, as well as the variety used and the method of cooking, affects the texture of cooked rice—whether it tends to be fluffy or mushy.

CU examined 19 widely available brands of rice, 18 of white rice and one of brown. Ratings are based on variety, color, absence of defects and percentage of broken grains.

From the *Reports*, June 1943.

WHITE RICE

BEST BUYS

The following brands were judged to offer the best value for the money in the order given. Figure in parentheses is the cost per pound.

National Brand. 10¢ for 1 lb. box (10¢). Blue Rose variety. Good quality. Pearly color. Very few broken and few discolored grains. Available in Illinois, Indiana, Michigan, Wisconsin and Iowa, in National Tea stores.

Sultana Extra Fancy (A&P). 8¢ for 12 oz. box (10.7¢). Blue Rose variety. Good quality. Pearly color. Few broken and discolored grains. Available nationally in A&P stores.

Ehler's Extra Fancy. 12¢ for 1 lb. box (12¢). Honduras variety. Good quality. Fair color. Many broken grains. No discolored grains. Available in the New York metropolitan area.

(Continued next page)

BEST BUYS—CONT'D

Kroger's (Kroger Grocery & Baking Co.). 12¢ for 1 lb. bag (12¢). Blue Rose variety. Good quality. Pearly color. Few broken or discolored grains. Available in Kroger stores.

Sunnyfield Extra Fancy (A&P). 10¢ for 12 oz. box (13.3¢). Honduras variety. Good quality. Pearly color. Few broken or discolored grains. Available nationally in A&P stores.

Comet. 10¢ for 12 oz. box (13.3¢). Blue Rose variety. Good quality. Fair color. Very few broken and few discolored grains. Available nationally.

ACCEPTABLE

(*In estimated order of quality*)

Sunnyfield Extra Fancy (see "Best Buys").

National Brand (see "Best Buys").

Kroger's (see "Best Buys").

Sultana Extra Fancy (see "Best Buys").

Jewel Extra Fancy. 31¢ for 1 lb., 10 oz. box (19.1¢). Blue Rose variety. Good quality. Pearly color. Very few broken or discolored grains. Available in Jewel stores and on Jewel Auto Routes.

Ehler's Grade A. 19¢ for 1 lb. box (19¢). Blue Rose variety. Good quality. Pearly color. Few broken or discolored grains. Available in the New York metropolitan area.

Ehler's Extra Fancy (see "Best Buys").

Premier. 17¢ for 1 lb. box (17¢). Honduras variety. Good quality. Pearly color. Many broken grains. Few discolored grains. Available east of the Mississippi.

Carolina Brand. 19¢ for 1 lb. carton (19¢). Honduras variety. Good quality. Fair color. Many broken grains. Few discolored grains. Available nationally.

Roulston's Radio Brand. 12¢ for 12 oz. bag (16¢). Honduras variety. Good quality. Fair color. Considerable number of broken grains. Available in Long Island, Brooklyn and Staten Island in Roulston stores.

Comet (see "Best Buys").

Red & White Extra Fancy. 25¢ for 2 lb. box (12.5¢). Blue Rose variety. Fair quality. Fair color. Few broken and considerable number of discolored grains. Available nationally in Red & White stores.

River Brand. 8¢ for 12 oz. box (10.7¢). Honduras variety.

ACCEPTABLE—CONT'D

Fair quality. Fair color. Excessive number of broken grains and considerable number of discolored ones
Available nationally.

NOT ACCEPTABLE

River Coated. 11¢ for 1 lb. bag (11¢). Blue Rose variety.
Low quality. Mixed color. Excessive number of broken grains and considerable number of discolored ones.

Prim Fancy. 6¢ for 12 oz. box (8¢). Blue Rose variety.
Low quality. Fair color. Excessive number of broken and discolored grains.

Bohack Fancy. 11¢ for 1 lb. bag (11¢). Blue Rose variety.
Low quality. Fair color. Excessive number of broken and discolored grains.

Bohack's. 20¢ for 2 lb. bag (10¢). Blue Rose variety. Low quality. Poor color. Excessive number of broken and discolored grains.

Safeway. 10¢ for 1 lb. bag (10¢). Japanese variety. Poor quality. Poor color. Considerable number of broken grains.

SOYBEANS

The soybean contains up to 40 per cent protein. Authorities agree that this protein is of very high quality; according to many it is a complete protein containing adequate amounts of the "essential" aminoacids found in meat—those necessary for growth and well-being. The soybean has a larger proportion of protein than any other natural foodstuff and more than any processed food except dried egg-whites. The cost of the protein in soybeans is about 1/30th that of the average cost of protein in other high protein foods.

Soybeans have about 20 per cent fat. This fat is in a highly digestible form, and contains adequate amounts of "essential" fatty-acids. The cost of the soybean fat is also lower than that of many other edible fats.

The soybean is only about 25 per cent carbohydrate, of which almost none is starch. Yet the price of soybeans is about the same as that of most high-carbohydrate foods.

The soybean is relatively rich in the important A and B complex vitamins, yet it is a very cheap source of vitamins. The mineral content of the soybean is high.

especially in the important elements, such as iron, calcium and phosphorus.

Lecithin, a phospholipid, is used in the prevention and the treatment of certain types of liver disease, and it plays an important role in fat metabolism. No foodstuff exceeds the soybean in phospholipid content, and only eggs and calves' brains approach it.

Fats, proteins, and carbohydrates all provide calories. The soybean consists mainly of sources of calories which also provide other essential elements. Yet the price of soybean products is not significantly higher than that of wheat flour, and with increased production, the price should be even lower.

CU technicians conducted taste tests on many types of soy products. These tests were not comparative. They were not intended, for instance, to determine whether one brand of canned green soybeans tasted better than another, but rather to find out if canned green soybeans in general were palatable. The main objection to many products was that they were "flat." This is to be expected, since many of these products are made primarily for "special" diets, and for this reason are only slightly seasoned, if at all. The addition of seasoning or, as in the case of the meat substitutes, the addition of an egg, onion or vegetables makes a decided improvement in the flavor.

Most of the products listed below were available in health food stores and cooperatives. Grocery departments in department stores and large grocery chains stocked some of them and with increased consumer demand, there will be wider distribution. Brands are listed in order of increasing price in each category.

From the *Reports*, March and August 1943.

CANNED SOYBEANS

These may be served hot or cold, and used in the same way as canned peas or beans. When served without additional flavoring, just as they came from the can, the flavor was considered to be only fair. Additional seasoning improves the flavor. Canned soybeans are a "best buy" as compared with canned peas or beans. Though the price is generally slightly higher, the nutritive value is considerably greater.

CANNED GREEN SOYBEANS*(Figure in parentheses is cost per 4 oz. serving.)*

Miller's (International Nutrition Laboratory, Mt. Vernon, Ohio). 23¢ for No. 2 can (5.5¢).

Sanitarium (Battle Creek Food Co., Battle Creek, Mich.). 26¢ for No. 2 can (5.8¢).

Arcadia (Sherman Foods, Distributor, NYC). 29¢ for No. 2 can (5.8¢).

Miller's Giant (International Nutrition Laboratory). 23¢ for 1 lb. can (5.8¢); 18¢ for 9 oz. can (8¢).

Nutrisoy (Nutrisoy Co., NYC). 29¢ for No. 2 can (5.8¢); 23¢ for 15 oz. can (6.1¢).

Island Farm (Draper Canning Co., Milton, Del.). 17¢ for 10 oz. can (6.8¢).

SOY BEANS IN TOMATO SAUCE*(Figure in parentheses is cost per 4 oz. serving.)*

Loma Linda, Vegetarian (Loma Linda Food Co., Arlington, Calif.). 18¢ for 1 lb., 1 oz. jar (4.2¢).

Cellu (Chicago Dietetic Supply House, Inc., Chicago). 12.5¢ for 8 oz. can (6.3¢).

Madison (Madison Foods, Madison College, Tenn.). 9¢ for 5 oz. can (7.2¢).

PREPARED MEAT SUBSTITUTES

These products contained various combinations of soybeans, soy flour, etc., with peanuts, tomato juice, wheat gluten and other products to make a good combination. They can be used hot or cold, in sandwiches, in salads, in meat recipes as extenders, or as "meat" dishes — fried, croquettes, baked, etc.

When these were served cold, the flavor was considered flat. When served hot or when prepared with onions, condiments or vegetables as a "meat" dish the flavor was much better. The cost per pound is generally lower than meat, making them a valuable meat extender. Practically all the labels give recipes and directions for use.

(Figure in parentheses is cost per lb.)

Vigorost (Madison Foods). 25¢ for 14 oz. can. (29¢). Contained gluten, soy cheese, peanut meal, seasoning.

Yum (Madison Foods). 25¢ for 14 oz. can (29¢). Contained gluten, soybeans, peanut meal, water, season-

Zoyburger (Madison Foods). 25¢ for 14 oz. can (29¢). Contained soybeans, gluten, peanut meal, soy sauce, seasoning.

Soytone (Hain Pure Food Co., Los Angeles). 25¢ for 14 oz. can (29¢). Contained wheat gluten, nuts, soybeans, tomato juice, seasoning.

Nuteena (Loma Linda Food Co.). 30¢ for 14 oz. can (34¢). Contained unroasted peanut butter, wheat cracker meal, soybeans, yeast extract, salt, seasoning, vitamins B₁ and G, and the minerals calcium, phosphorus and iron.

Seibert's Soyatose (Hygienic Food Co., Glendale, Calif.). 15¢ for 7 oz. can (34¢). Contained soybeans, nuts and grains.

Soy Protose (Battle Creek Food Co.). 35¢ for 1 lb. can. Contained wheat gluten, peanut oil, soybeans and sugar.

Vivi-Ta Defense-Burger (Vegetable Juice and Products Co., Rochester, N. Y.). 35¢ for 1 lb. can. Contained wheat gluten, soybean meal, eggs, lentils, pecans, onion, salt and seasoning.

Proteena, Dark, Mushroom flavor (Loma Linda Food Co.). 33¢ for 14 oz. can (38¢). Contained wheat gluten, peanuts, soybeans, yeast extract, tomato juice, salt and flavorings.

Vegetona (Loma Linda Food Co.). 33¢ for 14 oz. can (38¢). Contained soybeans, wheat gluten, unroasted peanut butter, onions, tomatoes, salt, seasoning, vitamins B₁ and G and the minerals calcium and phosphorus.

SANDWICH SPREADS

These spreads were similar to the meat substitutes in composition, but meant to be used cold. The flavor was considered fair when served as they come from the can. When mixed with hard-cooked eggs, olives, celery, etc., they make a tastier mixture. Some of these spreads may also be used as extenders in croquettes, etc.

(Figure in parentheses is cost per lb.)

Soy Cheese (Madison Foods). 25¢ for 14 oz. can (29¢). Contained soybean curd, soy oil and seasoning. May be used as a meat substitute.

Miller's Soya Spread (International Nutrition Labora-

tory). 10¢ for 5 oz. can (32¢). Contained soybeans, tomato puree, vegetable oil, soy sauce, vegetable seasoning, onion, sea salt.

Soy Food (Loma Linda Food Co.). 30¢ for 13 oz. can (37¢). Contained soybeans, salt and flavoring. May be used as a meat substitute.

Soy Mince Sandwich Spread (Loma Linda Food Co.). 13¢ for 5 oz. can (42¢). Contained soybeans, olives, peanut butter, tomato puree, lentils, wheat yeast extract, salt and flavorings.

Hain Sandwich Spread (Hain Pure Food Co.). 15¢ for 5 oz. can (48¢). Contained peanuts, soybeans, tomato juice, olives, pimientos, seasoning.

SOY FLOURS AND FLOUR MIXTURES

Soya flour cannot be used alone in baking because it contains no starch. It must be mixed with a considerable amount of wheat flour; the usual proportion is one part of soya flour to three parts of white wheat flour. Such mixtures may be used in the same way as wheat flour to make excellent breads, muffins, cookies, cakes, pie crusts, etc. The flavor is, in fact, enhanced by the addition of the soya flour.

Many of the packages listed below gave recipes for using soy flour and additional recipes may be had from Leaflet No. 166 of the U. S. Department of Agriculture "Soybeans for the Table" (write, Sup't of Documents, Washington, D. C., 5¢), from the Soya Corporation of America, 30 Rockefeller Plaza, NYC, or from almost any processor of soybeans.

(Figure in parentheses is cost per lb.)

Co-op Soy Bean Flour (Eastern Co-operative Wholesale Inc., Brooklyn). 22¢ for 2 lb. (11¢).

Arcadia Soya Flour (Sherman Foods). 23¢ for 1 lb.

Cellu Soy Bean Flour (Chicago Dietetic Supply House, Inc.). 35¢ for 1½ lb. (23¢).

Dia-Mel Soy Bean Flour (Dietetic Food Co., Inc., Brooklyn). 30¢ for 1 lb.

Golden Soy Griddle Cake Mix (Soy Food Mills, Chicago). 15¢ for 1 lb. (12¢). Contained unbleached wheat flour, specially prepared soya product, dextrose, salt, baking powder. Made excellent griddle cakes and waffles.

(Continued next page)

Vee-Bee Soy Muffin Mix (Vee-Bee Co., Chicago). 20¢ for 12 oz. (27¢). Contained soybean flour, some wheat germ, flour, bran, calcium acid phosphate and sodium bicarbonate. Muffins were rather heavy.

Loeb's Soya Soupaide (The Loeb Dietetic Food Co., Inc., NYC). 10¢ for 2 oz. (80¢). Contained soy flour, barley flour, spices, salt, protein derivative. Used in soups, gravies, sauces or stuffings.

SOY CRACKERS AND COOKIES

Unless otherwise indicated, these were unsweetened crackers used for canapes, with soup or salad, or as snacks.

(Figure in parentheses is cost per lb.)

Nabisco Soyas (National Biscuit Co., NYC). 17¢ for 10 oz. (27¢).

Nabisco Soya Cocktailers (National Biscuit Co.). 11¢ for 5½ oz. (33¢).

Lust's Soya-Cookies (Lust's Health Food Bakery, NYC). 12¢ for 4 oz. (48¢). Sweet dessert cookies.

Cubbison's Soya Toast (Cubbison Cracker Co., Los Angeles). 23¢ for 7 oz. (52¢).

Nutty Soy Bean Thins (Frank Burns, Inc., Philadelphia). 23¢ for 7 oz. (52¢).

Ivins' Soya Thin Wafers (J. S. Ivins' Sons, Inc., Philadelphia). 23¢ for 7 oz. (52¢).

Dia-Mel Dietetic Soy Bits (Dietetic Food Co., Inc.). 30¢ for 4 oz. (\$1.20).

B-C Soy Gluten Wafer (Battle Creek Food Co.). 30¢ for 3½ oz. (\$1.37).

Dia-Mel Kream Krax (Dietetic Food Co., Inc.). 29¢ for 2¼ oz. (\$1.85). Sweet Dessert Cookies.

DRIED SOYBEANS

Dried soybeans may be used like other dried beans for baking, in soups and as meat stretchers. "Tenderized" soybeans do not require soaking and cook much more quickly than do dried soybeans. They have a nutty flavor and may be eaten raw, though light roasting and salting enhances the flavor. Soy grits may be used as a cooked cereal, in meat recipes, in baking, etc. These products were considered generally good.

(Figure in parentheses is cost per lb.)

Co-op Dried Green Soy Beans (National Co-operatives, Inc., Chicago). 22¢ for 2 lb. (11¢).

Co-op Soy Grits (Eastern Co-operative Wholesale, Inc.). 22¢ for 2 lb. (11¢).

Co-op Tenderized Soybeans (Eastern Co-operative Wholesale, Inc.). 24¢ for 1 lb.

Co-op Granulated Soynuts (National Co-operatives, Inc.). 24¢ for 1 lb.

Penna's Tenderized Soy-Beans (Penna Soya Products Co., Inc., Williamsport, Pa.). 26¢ for 1 lb.

MISCELLANEOUS SOY PRODUCTS

Co-op Pure Soya Bean Salad Oil (National Co-operatives, Inc.). 27¢ for 1 pt.

Arcadia Soya Oil (Sherman Foods). 42¢ for 1 pt.

Cellu Soyamaise (Chicago Dietetic Supply House, Inc.). 50¢ for 1 pt. Contained soybean oil, eggs, cider vinegar, salt.

SOY "BUTTERS" are similar to peanut butter. They have an oilier flavor and, unless the oil is hydrogenated, it tends to separate from the butter and to form a layer on the surface.

Toasted Soy-Bean-Butter (Penna Soya Products Co., Inc.). 15¢ for 7 oz. Contained soybeans, virgin soybean oil. Oil separated.

Tom Soya Butter (Penna Soya Products Co., Inc.). 19¢ for 7 oz. Contained puffed soy flour, refined and hydrogenated soy oil, salt, almond flavoring.

SALTED SOYBEANS, to be eaten like peanuts, are also available in bulk at many stores.

Salty Soys (Dewey Food Products, Inc., Chicago) are a snack item like salted peanuts or other nuts. Six ounces cost 10¢ to 15¢ or more.

Other soy products include soy "milks" and drinks (see page 16) and soy cereals (see page 23).

The soy "milks," with nothing added to disguise their flavor, were quite unpalatable. The flavor of soy drinks depended on the strength and quality of other flavoring—cocoa, banana, malt, etc.—added to the combination. The flavor of dehydrated soy drinks was generally better when they were made up with milk rather than with water.

Clothing & Textiles

Clothing prices in September, 1943 were 5.3% higher than in September, 1942 according to the Bureau of Labor Statistics. But this figure understates considerably the actual rise caused by factors like the disappearance of low-priced lines and the marked worsening of quality that took place in 1943.

In infants' and children's clothing, shortages had become so severe by the Fall of 1943 that the government took steps to promote the manufacture of infants' undergarments and shoes, where the shortages were most acute. Higher prices for infants' and children's clothing can be expected in 1944 and the supply will not be equal to the demand in most items.

More expensive women's coats, suits and dresses were about the only thing available in 1943. The unavailability of low priced clothing was being tackled by the government, but in 1944 prices for women's clothing will probably continue upward and quality will keep going down. Women's underwear and stockings and accessories will be sufficient to meet demand in 1944 but again prices will be higher.

There has been the same shrinkage in the supply of low-priced men's clothing. But there will be plenty of suits and overcoats in the higher priced lines in 1944. Shirt supplies are ample, but white shirts will be harder to get. Pajamas are scarce and low-price underwear has practically disappeared from most store shelves.

The present ration quota for shoes (two pairs a year per person) will probably be continued in 1944. Supplies of leather for civilians are scarce and will not improve until the end of the European phase of the war. The production of non-rationed shoes for women and children, using non-leather soles and uppers, is being expanded to ease the pressure on the nation's stockpile of leather and rationed shoes.

The wool and textile situation will continue to be tight for the duration. There is need for clothing rationing and for the rationing of some textile products but at this writing (November, 1943) the government shies away from this drastic but necessary step.

BATH TOWELS

A bath towel should be absorbent and able to withstand hard usage. Turkish toweling is especially ab-

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sorbent because it is woven on special looms which form loops on both sides of the fabric. In general, the number of loops per square inch determine the absorbency of the towel, while the number and type of threads in the basic weave determine how well the loops are anchored, and how well the towel will wear.

Simple examination does not disclose all the factors that go to make up a Turkish towel, but here are a few things to look for:

A tightly woven, evenly balanced towel, when held up to the light, shows the light in even pin-points. An unbalanced weave allows light to come through in uneven blotches.

The pile of the towel should be not only abundant and close, but even in height. If some loops are higher than the rest, they tend to catch and pull out.

There should be adequate selvages on both sides of the towel. Cheap toweling is woven twice the width of the finished towel, cut down the center and hemmed. Such a hem is not as strong as a selvage.

For ratings of bath towels see January 1944 *Reports*.

BOYS' BLOUSES

Shirts with open necks and short sleeves are best for growing boys. They are more comfortable, and are not outgrown so quickly as those with buttoned-up collars and long sleeves. To get the best fit, measure neck, chest and sleeve length. Choose full-cut shirts made of firm, evenly woven materials that are fully shrunk and colorfast.

Further advice on buying boys' shirts and blouses is contained in a pamphlet put out by the Government: "Cotton Shirts for Men and Boys"; Farmers' Bulletin No. 1837, U. S. Dept. of Agriculture; available from Sup't of Documents, Washington, D. C. 5¢.

GIRDLES

The elastic-knit, two-way stretch girdle is fast becoming a war casualty. Girdles now being manufactured have only a narrow panel of elastic on either side. They have no more than two pairs of garters,

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and only the back ones are elastic. Some girdles for heavier figures are resorting to lacings for snug fit. Others have hooks and eyes in place of zippers.

Proper care of a girdle can prolong its life considerably. It should be washed frequently with neutral suds and lukewarm water—ideally after every wearing. Never allow the garment to become badly soiled, so that it needs hard scrubbing to get it clean. A garment containing elastic should never be wrung. Roll it in a turkish towel after washing and then lay it out flat to dry, away from heat and direct sunlight. Fabric panels may be pressed with a warm iron while damp, but do not use an iron on elastic portions.

The boning in a girdle is often the first part to go. If bones snap or push through their casing when the rest of the garment is still in good condition, have them replaced at once. Once the boning is gone, the garment quickly loses shape and is worthless. Most department stores and corsetieres will make small repairs on a girdle for a nominal cost.

CHILDREN'S SHOES

Fit and durability are the two factors to consider in selecting children's shoes. CU's tests showed that it is not necessary to buy the most expensive brand to get good sturdy shoes, but those selling for less than \$3 are likely to be poor buys.

Fit: Properly fitted shoes are essential to normal growth of children's feet. Besides, poorly fitted shoes wear out more quickly.

Have the shoes fitted to the child in the store. Have each foot measured separately for length and width while the child is standing; use the larger measurements to determine shoe size. The shoe should be about one inch longer than the foot.

See that the shoe allows plenty of room for normal spread and growth of the feet. The toes of the shoes should leave room for the child's toes to lie straight out and slightly separated. Judge this by feeling the foot through the shoe upper while the child is standing. You should be able to pinch the leather slightly together between your fingers when you draw them across its width; also, the widest part of the shoe should be at the widest part of the foot—across the joints of the large and small toes.

The inner edge of the shoe should be straight. The arch of the shoe should not flatten when the weight of the body is on the foot. The shoe sole should be flexible enough to bend as the child walks. Test this by having him walk on tiptoe.

A laced shoe with an adequate tongue is best for children, since the fastening over the instep should be adjustable. Easing or tightening the laces ought to adjust the shoe without distorting its shape. Sandals with buckled straps are better than those with buttons.

It is not wise, especially with shoes rationed, to keep a pair of children's shoes solely for "dress." The "dress" pair is usually outgrown long before it is outworn.

Durability: Strength of shoes depends on construction and material. Goodyear welt construction is the best; soles of shoes so built are easiest to repair without injuring the fit or structure of the shoe. This feature cannot be identified without taking the shoe apart, but of the brands tested only one did not have it.

The shank, the support at the arch, between inner and outer sole, should be of steel, steel and leather, or leather, steel and paper. Wood is less desirable. A few good brands exclude the shank and rely on other points of support. If well made, shoes can be satisfactory either with or without shank.

The counter—the reinforcement at the back of the shoe—should be of leather, not of impregnated paper.

The heel lift should consist of at least two, preferably three layers of leather, with a rand (a horseshoe-shaped strip of leather, tapered toward its inner rim, forming the layer closest to the sole). Having the top of the lift hollowed out to fit the curve of the wearer's heel is less satisfactory than a rand. A heel made of one piece of rubber or leather is inferior, as are lifts made of layers of paper. The heel pad should be of leather, not leatherette or paper.

The tongue should be wide and firmly sewn to prevent its slipping to one side. Lining if present should be sewn, not pasted, to the tongue, preferably with two rows of stitching.

On laced shoes there should be at least five, preferably six eyelets in each row. Those which are visible on the outside as well as the inside of the shoe are somewhat more durable.

(Continued next page)

The lining in the back of the shoe should be leather rather than leatherette and should have an interlining (doubler). It should extend into the vamp area. If cloth is used for lining, it should be strong enough to withstand heavy wear.

Leather should be of good quality. CU tested the thickness of leather and the abrasion resistance of outer-sole and insole, and the tensile strength of outersole, insole and upper. But since quality was found to vary considerably even in different shoes of the same pair, less stress was given to material than to construction in the ratings.

• CARE OF SHOES

You can help children's shoes to last longer by keeping them well polished (preferably with paste polish—see "Shoe Polish," p. 330) and repairing any damage as soon as it occurs.

When they become wet, pack the shoes with newspapers without distorting their shape and let them dry away from direct sunlight or heat. When dry, rub uppers and leather soles with castor oil; polish with a dry cloth, then with shoe polish. Do not apply oil to rubber soles or heels.

Buying shoes with toes of scuff-resistant plastic or scuff-resistant leather like sharkskin helps somewhat to prevent scuffing. (Toes of pyroxylin-covered leather, pressed to imitate sharkskin, are not necessarily scuff-proof). But children also scuff other parts of their shoes. Bad scuff marks can be improved by treatment with a good scuff polish. In CU's tests brown shoes seemed to scuff more readily than black ones, especially in the absence of scuff-proof toes.

From the *Reports*, April 1943.

BEST BUYS

The following brands of shoes were considered to offer the best value for the money in the order given.

Coward (Coward Shoe, Inc., NYC). \$3.95. Good construction; good material. Leather heel pad and quarter lining. Heel lift made of two layers of leather. Toe box was pyroxylin-coated and resisted scuffing to some extent. Shank of steel and impregnated paper.

Kalisteniks (Gilbert Shoe Co., Thiensville, Wis.). \$5. Good construction; good material. Leather heel pad

BEST BUYS—CONT'D

and leather quarter lining which was inter-lined. Heel lift made of two layers of leather with a heel rand. Toe box leather was not treated but was scuff-resistant. No shanks.

ACCEPTABLE

(*In estimated order of quality*)

Indian Walk (Foot Form Shoe Shops, NYC). \$6.95.

Very good construction; fair material. Leather heel pad and quarter lining. Heel lift made of three layers of leather with a heel rand. One pair had a pyroxylin-coated toe box which stained but showed good resistance to scuffing, while the other pair was not coated and scuffed easily. One pair had a steel shank and the other a leather shank.

Kalisteniks (see "Best Buys.").

Coward (see "Best Buys.").

Buster Brown (Brown Shoe Co., St. Louis). \$4.50. Fair construction; very good material. Leather quarter lining which was interlined. One pair had a heel lift of one piece of leather and a paper-fibre heel pad while the other pair was made of two layers with a rand, and a leather heel pad. Toe box of plastic which resisted scuffing. Wood shank.

Pediforme (Pediforme Shoe Co., NYC). \$7. Very good construction; poor material. Leather heel pad and quarter lining. Heel lift made of two layers of leather and a rand. Pyroxylin-coated toe box which scuffed easily. Steel and leather shank.

Macy's Right Shape (R. H. Macy & Co., NYC). \$4.49. Good construction; fair material. Leather heel pad and quarter lining which was interlined. One pair had a heel lift of one layer of leather and the other pair of two layers. The brown pair had a pyroxylin-coated toe box which stained but showed good resistance to scuffing. The black pair had a sharkskin toe box which showed good resistance to scuffing. Steel shank.

Pedi-Poise (J. Edwards and Co., Philadelphia). \$5.50. Good construction; fair material. Leatherette heel pad and leather quarter lining which was inter-lined. One piece heel lift with a rand. Pyroxylin-coated toe box which scuffed easily. Steel shank.

(Continued next page)

ACCEPTABLE—CONT'D

Classmates (Ideal Shoe Mfg. Co., Milwaukee). \$3.25. Fair construction; good material. Leatherette heel pad and leather quarter lining. Heel stay inserted in back of shoe to keep shoe from slipping off foot. One-piece heel lift. Pyroxylin-coated toe box which showed poor resistance to scuffing. Wood shank.

Educator (G. R. Kinney Co., NYC). \$2.74. Poor construction; good material. Paper-fibre heel pads and leather quarter lining. One pair of shoes had an interlined quarter. The other was not interlined. One pair was made without a heel lift, the rubber heel coming right up to the sole. The other pair had a lift made of one piece of leather. The brown pair had a sharkskin toe box. The black pair was plain leather. Both showed good resistance to scuffing. Wood shank.

Pavement Pounders (Thom McAn, NYC). \$2.99. Poor construction and material. Leather heel pad and leatherette quarter lining which did not reach into the vamp. One-piece rubber heel lifts. Pyroxylin-coated toe box. The brown pair scuffed badly; the black was scuff-resistant. Wood shank.

NOT ACCEPTABLE

Sandy Nevin Jr. Cat. No.—5852P (Sears, Roebuck and Co.). \$2.75 plus postage. Only brand not having Goodyear welt. Very poor construction; sole and upper leather very good. Prewelt construction except that stitching which tied upper to welt also tied the insole. This allowed stitching threads to protrude on top of insole which may irritate the feet. Paper-fibre heel lift. Sharkskin toe box which resisted scuffing. Wood shank.

CHILDREN'S UNDERWEAR

Age is the least desirable basis for size in children's underwear, extensive studies show. Yet most manufacturers label children's underwear with sizes based on age, and the same size label from different manufacturers may differ.

Buy children's underwear by actual measurements rather than by marked size. The simplest way is to measure the child around the hips and trunk. (Trunk measurements are taken by passing a tape measure from

the shoulder around the crotch and back to the shoulder.) A garment about one inch larger than the child's measurements is best.

Children's shirts, shorts and union suits should fit fairly snugly. A snug-fitting garment is more comfortable than a tight, binding one or loose one.

Material: Many doctors and child specialists warn against undergarments containing wool because they may irritate the skin.

Garments made entirely of cotton are far better than those decorated with shiny rayon stripes.

The most common cotton fabrics used are ribs and flat knits. The rib knits are more elastic but the flat knits are more durable. CU's tests, however, indicate that there is little difference in the wearability of the fabric used in most children's underwear.

Construction: Seams should be so constructed that the garment can be stretched without tearing the sewing thread or opening the stitches. This construction is especially needed at the waistband of shorts.

Raglan sleeves give more freedom of movement than other types, and overlap shoulders on shirts or vests make them easier to put on without large neck openings.

Buttons should be large and smooth, and easily reached. Button holes should be large enough to allow the button to slip easily into them. Of real value to the child who is learning to take care of itself is the "self-help" seat.

The ratings below are based on tests for bursting strength and resistance to abrasion, as well as examination of construction and design.

There appeared little difference in wearing quality of fabrics of the same weight in the different brands.

From the *Reports*, August 1943.

BEST BUYS

The following brands were judged to offer the best value for the money in the order given.

Ward's Comfytogs (Montgomery Ward). Shirt: Cat. No.—29A728, 19¢, plus postage.

Penney's (J. C. Penney Stores). Shorts: 25¢, 19¢; union suits: 39¢; two-piece suits: 39¢.

Woolworth (Woolworth Stores). Shirt: 20¢; two-piece suit: 40¢.

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ACCEPTABLE*(In approximate order of quality)***Me Do** (Thomas Dalby, Inc.). Union suit: 90¢.**Vanta Double Duty** (Earnshaw Knitting Co.). Shorts: 69¢; shirt: 59¢; union suit: \$1.29.**Ward's.** (See "Best Buys.")**Jockey Jr.** (Coopers, Inc.). Shorts: 45¢; shirt: 45¢.**E-Z** (E-Z Mills). Shirt: 35¢; three-piece suit: \$1; union suit: 69¢.**Munsingwear** (Munsingwear, Inc.). Shorts: 54¢; shirt: 39¢.**Forest Mills** (Brown, Durrell Co.). Shorts: 35¢, 39¢; shirt: 35¢; union suit: 29¢.**Ern-Tex** (Available at 10¢ stores.). Shorts: 20¢, 35¢; shirt: 20¢.**Penney's** (See "Best Buys.")**Speedon** (E-Cut Knitting Mills). Union suit: 69¢; two-piece suit: 89¢.**Woolworth.** (See "Best Buys.")**Hudson** (J. L. Hudson Store, Detroit). Shirt: 29¢; union suit: 85¢.**Carter's** (Wm. Carter Co.). Shorts: 65¢; shirt: 65¢; union suits: \$1.25, \$1; two-piece suit: \$1.10.**Globe** (Globe Knitting Mills). Shirt: 50¢; union suit: 85¢.**Wittywear** (Crowley, Milner & Co. Department Store, Detroit). Shorts: 39¢; shirt: 39¢.**Supre-Macy** (R. H. Macy Store, NYC). Shorts: 49¢, 54¢, 59¢; union suits: 89¢, 79¢; shirt: 49¢.**Filene's Crest Brand** (Filene Department Store, Boston). Shorts: 59¢; shirt: 49¢; union suit: 90¢.**Princess May** (Augusta Knitting Mills). Shorts: 65¢, 60¢, 55¢; shirt: 55¢.**Nazareth** (Nazareth Waist Co.). Shorts: 35¢; shirt: 35¢; union suit: 54¢.**Quickees** (Boston Knitting Mills). Shorts: 57¢, 50¢; shirt: 55¢; union suit: \$1.**DIAPERS**

Diaper service, disposable paper diapers or diaper pads are recommended for those who can afford them. Diaper service is the best of these and costs no more than the others. The fabric diapers it supplies are better than paper diapers. But wartime conditions have made this service unavailable in many communities; in others, it is

necessary to get on a "waiting list" many months before the baby's birth to make certain that the service will be available when needed.

If you cannot afford one of these conveniences, you will have to buy fabric diapers and launder them yourself. You'll need at least three dozen. You can get rid of most of the soil by swishing the diaper in the toilet bowl and flushing the toilet until the diaper is relatively clean. Then place it in an interlined can until you're ready to wash it.

You can choose among flannel, birdseye or gauze diapers. Flannel is softest and most absorbent, but it takes longest to dry, and the fuzzy nap may bother your baby. Birdseye diapers absorb less but dry faster; their pattern irritates some babies' skin. Gauze is least absorbent but fastest drying. Its relative stiffness may be too harsh. The best plan is to buy a few diapers of each fabric and see which causes the least chafing. If none bothers the baby, choose the type most convenient for you to use.

DISHCLOTHS

A good dishcloth can be improvised by using any cloth large enough to provide adequate rubbing area, absorbent enough to pick up water from surfaces and strong enough to resist tearing in use or after hard laundering. Commercial dishcloths are popular merely because of their better appearance and low price.

Prices of dishcloths range from $3\frac{1}{3}\text{\$}$ to 20¢. Cloths priced from 7¢ to 10¢ are generally the best buys; laboratory tests showed that they tend to last as long as the more expensive cloths.

From the *Reports*, January 1942.

DISH TOWELS

A dish towel should be strong and absorbent; it should be made of long staple, good quality yarn, lightly twisted and firmly woven. If too tightly woven, it will not be sufficiently absorbent. It should not shed lint excessively. Colored dish towels should be color fast to hard laundering. These qualities vary in different brands and types.

Dish towels are made of linen, cotton, mixtures of both or mixtures of linen, cotton and rayon. Linen towels are strong, lint-free and highly absorbent, but expensive. Cotton is also strong, and satisfactorily absorbent, but it sheds somewhat more lint than linen. Plain cotton or

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cotton and linen towels are much cheaper than pure linen, and do an effective job. They are better buys. Part linen towels should have at least 25% linen content in order to benefit from the presence of the linen. Rayon combination towels are unsatisfactory, because rayon becomes weak when wet.

Most dish towels contain some finishing or sizing which should be washed out before use. More than 2% to 3% sizing is undesirable. To test for this, rub a towel against itself; if powder falls off, there's probably too much sizing present. Some types of finishing that won't show up in this test will come out in the wash. When buying, inquire about the finish and insist on returning the towel if it looks sleazy after washing.

Dish towels should have selvages along both sides. Ends should be hemmed firmly with tight stitches and backstitched to prevent raveling; there should be no free fabric ends.

Knitted towels are highly absorbent, leave little lint and are very strong.

Dish towels should be washed every day with hot water and plenty of suds, and if possible, hung in the sun to dry. Do not buy towels if their washing instructions caution against use of hot water, strong soap or a hot iron. Either fabric or color will be too delicate to be durable.

CU tested four to six samples of each brand for tensile strength, resistance to abrasion, weight, thread count, absorbing capacity, shrinkage, amount of sizing, and linen content where claimed. In rating, special weight was placed on resistance to abrasion and absorbing capacity. One knitted towel was tested for purposes of comparison.

From the *Reports*, January 1942.

BEST BUYS

The following dish towels of the "Acceptable" list were judged to offer the best value for the money.

Boott Drywell (Boott Mills, Lowell, Mass.). 6 for 60¢.
16½ x 31 in. Best of the 10¢ towels tested. Available nationally.

Fieldcrest Kwik Wipe (Marshall Field & Co., Chicago).
6 for 89¢. Available from Cooperative Distributors,
NYC, 6 for 84¢ plus postage, 16x32 in.

ACCEPTABLE*(In approximate order of quality)*

Martex Standard (Wellington-Sears, NYC). 6 for 92¢. 17x34 in. Available nationally.

Fieldcrest Kwik Wipe (see "Best Buys").

Startex (Startex Mills, Inc., Tucapau, S. C.). 6 for 90¢. 17x32 in. Available nationally.

Fieldcrest Easi-Dri (Marshall Field, Chicago). 6 for 89¢. 16x32 in.

Cannon Checks (Cannon Mills, Inc., NYC). 6 for \$1. 18x32 in. Available nationally.

Martex Dry-Me-Dry (Wellington-Sears). 6 for \$1.50. 17½x34 in. Available nationally.

Startex (Startex Mills, Inc.). 6 for \$1.79. 17½x33 in. Available nationally.

Cannon (Cannon Mills, Inc.). 6 for 90¢. 17x32 in. Available nationally.

Boott Drywell (see "Best Buys").

Startex Super-Dri (Startex Mills, Inc.). 6 for 99¢. 18x34½ in. Labeled 75% cotton, 25% linen. Available nationally.

Cannon (Cannon Mills, Inc.). 6 for 60¢. 16½x31 in. Available nationally.

Patex (Patex Fibre Corp., Midland Park, N. J.). 6 for \$1. 19x32½ in. Available nationally.

Cannon Dryfast (Cannon Mills, Inc.). 6 for 49¢ plus postage. 16x31 in. Selvage on one side only. Available nationally.

Cannon Dryfast (Cannon Mills, Inc.). 6 for 60¢. 16x28 in. Selvage on one side only. Different in construction from **Cannon Dryfast** above. Available nationally.

Startex Rainbow Stripe (Startex Mills, Inc.). 6 for 60¢. 16x30 in. Had excess of finishing material. Available nationally.

The following cotton knit towel is rated separately because it differed from the woven towels in construction.

Spongy (Wright Mills, Philadelphia). 6 for \$1.20. Available at F. W. Woolworth Stores. 16x36 in. Satisfactory strength, highly absorbent; no more lint than woven cotton towels.

FACE TOWELS

Special weaves—huck, crash, waffle, damask or cambric—are used to make towels absorbent and strong.

(Continued next page)

Huck, the most common weave made of linen or cotton, appears as a dotted, geometric design with a slightly rough surface. Crash, often used for guest towels, is absorbent because of unevenness of the weave. It may be linen, cotton, rayon or a combination of any two. Waffle weave towels are generally made of cotton; they are good utilitarian towels. Damask and cambric weaves are attractive but less effective.

Linen towels look best and wear best but are quite expensive. Linen and cotton mixtures are considerably less expensive and are satisfactory in appearance and drying ability. Rayon becomes weak when wet.

For maximum strength, face towels should have selvages along both sides. End hems should be firmly sewn with close even stitches and back-stitched to prevent raveling.

Since cotton huck towels are most popular and economical, tests were confined to them except for one huck with a damask design and one waffle weave towel chosen for comparison. Four to six samples of each brand were tested for resistance to abrasion, absorption, tensile strength, shrinkage, count and weight.

From the *Reports*, January 1942.

BEST BUYS

The following towels of the "Acceptable" list were judged to offer the best value for the money.

Boott Wipe Dry (Boott Mills, Lowell, Mass.). 10¢; 6 for 59¢. Labeled 16½x34½ in. but measured 17x31½ in.; samples purchased at Kress stores, not labeled for size, measured 15½x30½ in. Quality slightly lower than that of Boott towel listed below. Available nationally.

Cannon Waffle Weave (Cannon Mills, Inc., NYC). 10¢. 16½x29½ in. High absorption but comparatively low resistance to abrasion. Available nationally.

ACCEPTABLE

(In order of quality without regard to price)

Boott (Boott Mills). 29¢; 6 for \$1.50. 18x33 in. Heavy huck towel slightly larger and of slightly better construction than Boott Wipe Dry. Available nationally.

Boott Wipe Dry (see "Best Buys").

Cannon Waffle Weave (see "Best Buys").

Fieldcrest (Marshall Field & Co., Chicago). Available

FACE TOWELS, HANDKERCHIEFS 121

from Cooperative Distributors, 4 for 88¢ plus postage. 18x34 in.

Cannon (Cannon Mills, Inc.; purchased in W. T. Grant store). 10¢. 16½x22 in. Available nationally.

Fieldcrest (Marshall Field, Chicago). 19¢. Available from Cooperative Distributors, NYC. 4 for 66¢ plus postage, if ordered by mail. 16x32 in. Smaller than Fieldcrest listed above but similar in quality.

Cannon (Cannon Mills, Inc.). 10¢. 14x20½ in. Smaller than *Cannon* towel listed above with less absorption and higher shrinkage. Available nationally.

MEN'S HANDKERCHIEFS

Fabrics most often used for men's handkerchiefs are batiste and cambric, with some nainsook used for the cheaper lines. Batiste and cambric are both soft, thin fabrics, closely woven from mercerized threads, batiste being "calendered" to make it slightly more glossy on one side. Nainsook is heavier and more loosely woven. It is often used in handkerchiefs selling for 10¢ or less, and occasionally for higher priced ones of poor quality. Any of these fabrics may be woven of cotton or linen or a combination of the two. Not much linen is being used at present, but a good quality of cotton is just as durable and just as good looking.

Weave: The weave of a handkerchief should be close and even, the threads smooth and free from defects. Inspect these features by holding the handkerchief up to the light.

Size: Seventeen inches on a side is the minimum size for a satisfactory men's handkerchief. It should be torn to size rather than cut; otherwise it will stretch out of shape when washed. Check this by making sure that the threads along the edges are parallel to the hems.

Hems: Whether the edge is hand-rolled, machine-rolled, stitched down or hemstitched, make sure that there are no loose threads and that the stitching is close and even. These factors insure durability as well as good appearance.

Price: Handkerchiefs selling at 2 for 5¢ have always been inferior in quality. Today there are practically none to be found at this price.

At 5¢ handkerchiefs are poor in all-round quality, small, poorly hemmed and of inferior material.

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At 10¢ to 20¢ you will find best buys if you shop carefully. Material may be nainsook, cambric or batiste. Sizes vary from 17 to 19 inches square. Handkerchiefs are usually torn to size, their hems generally machine finished (though a few hand-rolled edges were found).

At 20¢ to 50¢ handkerchiefs range in size from 17 to 21 inches square. They are almost certain to be torn to size, with well finished hems.

For 50¢ and up you get nothing in added durability, and the noticeable improvement in appearance is slight. Size may go up to 24 inches square. Handkerchiefs may have fancy raised borders and hand embroidered monograms.

Where to buy: CU shoppers have found department stores and 5 & 10¢ stores the most reliable sources for good values. "Special values" offered by "linen stores" and street-corner peddlers rarely are genuine. Their "bargains" are often shoddy, third-rate merchandise.

The packaged handkerchiefs sold in drug stores and terminal stands were of very poor quality, CU found. The better-known brands like *Sealpackerchief* or Schulte's *Wearwell* offered better values, however, than the other packaged brands examined.

From the *Reports*, July 1943.

MEN'S OVERALLS

Both OPA and WPB have taken cognizance of the importance of work clothes in a series of standards and nation-wide price ceilings. These standards are designed to give maximum durability with a minimum of scarce material and labor.

Some overalls you find in the stores may have been manufactured before these orders were put into effect, as were many of those tested by CU. But in any case, look for the following on any garments you buy:

Material: A variety of fabrics is used, including denim, twill, covert and drill. Most widely used are the blue denims and blue-and-white (hickory striped) twills, which were included in CU tests.

Weight varies from six and a half to ten ounces for a piece of fabric a yard long and 28 inches wide. Choose a weight suited to the work you do: the lighter weights are suitable for light work; the heavier weights are needed for heavy work such as heavy industry, farming, and construction work. The weight of the fabric is generally stated on the label.

Preferably, overalls should be made of pre-shrunk fabric, so that they fit the first time they are worn, as well as after washing. The label is generally a reliable indication of whether or not the garment has been pre-shrunk.

Often legs of overalls are made much longer than necessary. Simply turning up the excess length may be hazardous, since the turn-up may catch in machinery. The best procedure is to cut off the ends, and save the cut-off material for later patching.

Sizing, to make the material seem sturdier than it is, can be detected by rubbing the material against itself. If excessive sizing is present, it will show up in the form of a white powder.

Stitches should be no less than ten to the inch on all seams and hems except the hem at the bottom of the leg, where a minimum of eight stitches to the inch may be used, according to OPA.

Seams should have two rows of stitching, and the joining of the materials at the seams should be such that no raw edges show.

Bartacks are extra reinforcing stitches at corners of pockets and ends of seams. There must be 42 stitches in a bartack, according to government regulations, with a total of 13 bartacks if the hip pockets are sewn into the side seams, and 15 bartacks if the hip pockets are not sewn in.

Bibs of the overalls may be attached in one of several ways. Most satisfactory is to have the bib first sewn to the trousers, then covered with a banding which is stitched down above and below the original seam. The general practice, however, is to have a single seam connect the bib and trousers and the bottom of the band. A second row of stitches holds down the top of the band. OPA regulations require that the band be of the same kind of material as the body, though it need not be the same weight.

Suspenders on overalls can be constructed in one of three ways: open, half-open and closed. The closed construction is the sturdiest, with half-open next best. In any case, the place in the back where the suspenders cross should be firmly sewn and bartacked.

Pockets on overalls for general use are limited to seven by WPB, except for those used by carpenters,

steel workers, painters and paperhangers, on which special pockets and reinforcements are permitted. In addition, one hammer loop or tool strap is allowed on all overalls. Whether the hip pocket has one side sewn into the seam or is separately attached is of little importance so far as wear is concerned. Side pockets are of the swing variety—somewhat like side pockets in ordinary trousers—in the better constructed overalls. Less satisfactory are side pockets which are simple patches, applied to the inside of the overall. Wartime regulations, however, call for no more than two pockets on the bib, and no more than a single button or snap, to fasten one of them.

Inspect the pockets before buying, to make sure that they are adequately reinforced at the opening by a bartack at each corner.

Buttons and buckles on overalls used to be made of aluminum or brass; today they are made of iron, plated or painted to retard rusting. Plated trimmings are more satisfactory, since paint comes off more easily and allows quicker rusting. All buttons and buckles should be riveted rather than sewn to the fabric.

From the *Reports*, May 1943.

BEST BUYS

The following overalls were judged to offer the best value for the money in the order given.

Hard Rock (The Fair Store, Chicago). \$1.89. 9 oz. denim. Available in Chicago. Not to be confused with *Hard-Rock*, listed as "Not Acceptable."

Powr House Cat. No.—7233. (Montgomery Ward). \$1.89 plus postage. 9 oz. denim. Available by mail order.

Headlight (Larned, Carter and Co.). \$2.39. 9 oz. denim. Nationally available.

Double-Duty (Hale Bros., Los Angeles). \$1.69. 9 oz. denim. Available in San Francisco and Los Angeles. Not to be confused with Smith's Double Duty.

The Fair (The Fair Store, Chicago). \$1.89. 8 oz. denim. Available in Chicago only.

Drum Major Cat. No.—40. (Sears, Roebuck and Co.). \$1.47 plus postage. 8 oz. hickory stripe. Available by mail order.

ACCEPTABLE*(In estimated order of quality)*

Note that denims and hickory stripes of the same brand are rated separately.

Headlight. Denim (See "Best Buys.")

Hard Rock. Denim (See "Best Buys.")

Lee (H. D. Lee Mercantile Co.). \$2.50. 9 oz. denim
Nationally available.

Powr House. Denim. (See "Best Buys.")

Double-Duty. Denim. (See "Best Buys.")

Smith's Double Duty (Smith's Overall Co., Brooklyn).
\$2.39. 7 oz. hickory stripe. Available mainly in New York and the metropolitan area, but also available nationally.

The Fair. Denim. (See "Best Buys.")

Sweet-Orr (Sweet-Orr and Co., Inc.). \$3.39. 8 oz. denim.
Nationally available.

Smith's Double Duty (Smith's Overall Co.). \$2.39. 8 oz. denim. Available mainly in New York and the metropolitan area, but also available nationally.

Lee (H. D. Lee Mercantile Co.). \$2.50. Nationally available.

Headlight (Larned, Carter and Co.). \$2.39. 7½ oz. hickory stripe. Nationally available.

Drum Major. Hickory stripe. (See "Best Buys.")

Oshkosh B'Gosh (Oshkosh B'Gosh Co.). \$2.29. 8½ oz. denim. Nationally available.

Roadmaster (W. T. Grant Co.). \$1.79. 9 oz. denim.
Available at Grant stores.

Go-Pfor (Johnson and Co., St. Peter, Minn.). \$1.95.
8 oz. denim. Available in Midwest.

Red Star (R. H. Macy and Co., Inc., NYC). \$1.69.
7½ oz. denim. Available in New York City.

Sweet-Orr (Sweet-Orr and Co., Inc.). \$2.39. 6½ oz. hickory stripe. Nationally available.

Double-Duty (Hale Bros.). \$1.69. 8 oz. hickory stripe.
Available in San Francisco and Los Angeles.

Can't Bust 'Em (Eloesser Heynemann Co., San Francisco). \$2.15. 7½ oz. hickory stripe. Available in the West.

Oshkosh B'Gosh (Oshkosh B'Gosh Co.). \$2.29. 8½ oz. hickory stripe. Nationally available.

Drum Major Cat. No.—66 (Sears, Roebuck and Co.).
\$1.47 plus postage. 8 oz. denim. Available by mail order.

(Continued next page)

ACCEPTABLE—CONT'D

W. T. G. (W. T. Grant). \$1.59. 8 oz. denim. Available in Grant stores.

Pay Day (J. C. Penney Co.). \$1.69. 8½ oz. denim. Available in Penney stores.

Can't Bust 'Em (Eloesser Heynemann Co.). \$1.98. 8 oz. denim. Available in the West.

Red Star (R. H. Macy and Co., Inc.). \$1.69. 8 oz. hickory stripe. Available at Macy's department store.

King Bird (H. L. Green Co.). \$1.66. 8 oz. denim. Available in Green or F. & W. Grand stores.

Pioneer Cat. No.—8232 (Montgomery Ward). \$1.47 plus postage. 8 oz. denim. Available by mail order.

Big Leed (Blue Bell-Globe Mfg. Co., Greensboro, N. C.). \$1.59. 6½ oz. denim. Available in the South.

NOT ACCEPTABLE

The following overalls shrank excessively in test and there was no allowance in fit to compensate for loss in size.

Bilt-Well (New England Overall Co.). \$1.79. 6½ oz. hickory stripe.

Bilt-Well (New England Overall Co.). \$1.79. 7 oz. denim.

Hard-Rock (New England Overall Co.). \$1.49. 6 oz. hickory stripe. This *Hard-Rock* is not to be confused with the *Hard Rock* listed among the "Best Buys" and sold by the Fair Store in Chicago.

MEN'S SHOES

Don't buy shoes unless you really need them. You may be able to save money and conserve valuable materials by looking through your old shoes, to see whether any of them can be made to do by a good job of repair.

But if you do need shoes the government's allotment should be adequate (unless your work requires an unusual amount of walking, in which case you are entitled to an extra shoe allotment), even if you can't afford the outlay for the best shoes, but are forced to purchase in the lower price categories.

Get the best buy you can afford by selecting from among those at the top of the "Best Buy" list, if you can. These shoes should retain their shape and good appearance for a long time and, if properly repaired, they should remain wearable through a considerable number of re-solings. If you can't afford the higher-priced shoes,

select a pair from among the lower priced "Best Buys."

Fit. For a given shoe size, there are differences in certain internal measurements of the shoe; length from ball of the foot to the toe; height of instep; comparative width of heel and front, etc. Which is why you may not be able to get shoes that fit your particular foot well in some brands.

Start at the top of the "Best Buy" list in the price category you want and try on several different shoes of each brand, until you find one that fits well.

The best way to find out whether a shoe fits is to walk around with both shoes on, and see if they feel comfortable. Check on these things:

Is the widest part of the shoe at the widest part of the foot?

Is there enough room at the toes so that there is no cramping, and the toes are not bent out of shape?

Can you feel the end of the toe box with any of your toes? If you can, the shoe is too short.

Does the heel of the shoe hug your heel firmly? If it doesn't your foot will slide up and down as you walk, and blisters may develop.

Do the laces have to be pulled very tight or allowed to gap too loose to make the shoe fit? If the gap is too large or too small, other proportions, too, are probably incorrect.

If the shoes fit at these points, and if they are otherwise comfortable, you can be pretty sure that you'll have no trouble with them so far as fit is concerned. Badly fitted shoes are not only uncomfortable; they go out of shape much more rapidly than do well-fitted shoes.

Special Features, like metatarsal and longitudinal arch supports, are not only unnecessary; they may be harmful. The normal foot doesn't need them; if there is something wrong with your foot construction, or if your feet hurt continually, you should see a foot specialist, who can analyze your trouble and prescribe the necessary remedy.

Testing: Because leather is so variable from hide to hide and even between adjoining sections of the same hide, there are large variations in leather quality between different pairs of the same brand and even between the two shoes of the same pair. While you can't be certain

of getting high quality materials in any particular pair of shoes in any brand, you are much more likely to get high quality in brands high on the list.

Because of the variability of the materials, each "Acceptable" rating is based on tests of six shoes (three pairs). In most brands, two different price lines were included in the tests, which required the purchase of six pairs in these brands. In a few cases, examination of one pair of shoes showed that construction was so poor as to merit a "Not Acceptable" rating whatever the quality of the materials used. Therefore additional pairs of these brands were not tested.

Following is a summary of the results of the tests, covering 143 pairs of men's shoes of 33 different brands and ranging in price from \$2 to \$22.50:

1. You can get shoes likely to last for the ration period at any price from about \$4 up.
2. If you want high quality shoes, you will have to pay from \$9 to \$11. While the highest quality of all brands tested sold for \$13.50, other brands, selling for \$8.95 and \$9.85 were practically as good.
3. On the basis of the tests, the highest priced shoes tested—\$22.50—ranked lower in the quality list than two brands selling for less than \$7.
4. The cheapest shoes tested, two mail order brands, priced at \$2 and \$2.25 respectively were judged too poor in both construction and materials to be worth buying.
5. Within the same brand, a somewhat higher price line is likely to be a little higher in quality, but in most cases the quality difference is too small to be worth the extra money.

From the *Reports*, July 1943.

BEST BUYS

The following brands were judged to offer the best value for the money in the order given. Ratings apply to specific price lines within each brand.

Coward (Coward Shoe, Inc.). \$8.95. Excellent construction and material. Available in Boston and New York.
Shriner Shoe (French, Shriner, and Urner Mfg. Co.). \$9.85. Excellent construction and material. Nationally available.

Florsheim (Florsheim Shoe Co.). \$10.50. Excellent construction and material. Nationally available.

Stetson (The Stetson Shoe Co., Inc.). \$10.95. Excellent

BEST BUYS—CONT'D

construction and material. Nationally available.

Nunn-Bush (Nunn-Bush Shoe Co.). \$10.85. Good construction and excellent material. Nationally available.

The following brands were judged to offer the best value for the money in the \$6 to \$9 price range in the order given:

Regal (Regal Shoe Co.). \$6.60. Good construction and material. Nationally available in Regal stores.

Penney (J. C. Penney Stores). \$6.90. Good construction and fair material. Nationally available in Penney stores.

The following brands were judged to offer the best value for the money in the price range below \$6 in the order given.

Thom McAn (Melville Shoe Corp.). \$4.20. Fair construction and good material. Nationally available except in California in Thom McAn stores.

Towncraft (J. C. Penney Stores). \$4.79. Fair construction and good material. Nationally available in Penney stores.

ACCEPTABLE

(*In order of quality*)

Nunn-Bush (Nunn-Bush Shoe Co.). \$13.50. Excellent construction and material. Nationally available.

Florsheim (Florsheim Shoe Co.). \$15.00. Excellent construction and good material. Superior construction used in these shoes more than makes up for somewhat lower rating of material. Nationally available.

Florsheim (Florsheim Shoe Co.). \$10.50. See "Best Buys."

Stetson (The Stetson Shoe Co.). \$13.95. Excellent construction and material. Nationally available.

Coward (Coward Shoe, Inc.). \$8.95. See "Best Buys."

Shriner (French, Shriner, and Urner). \$9.85. See "Best Buys."

Stetson (The Stetson Shoe Co.). \$10.95. See "Best Buys."

Nunn-Bush (Nunn-Bush Shoe Co.). \$10.85. See "Best Buys."

Strate-Eight (Associated Merchandising Corp.¹). \$9.50. Excellent construction and good material.

Walk-Over (George E. Keith Co.). \$10.95. Excellent construction and good material. Nationally available.

¹ For a list of AMC stores, see page 10. (Continued next page)

ACCEPTABLE—CONT'D

John Ward (Melville Shoe Corp., NYC). \$10.45. Excellent construction and material. Available in NYC.

Bostonians (Commonwealth Shoe and Leather Co.). \$10.50. Excellent construction and good material. Nationally available.

Nettleton (A. E. Nettleton Co.). \$11.45. Good construction and excellent material. Nationally available.

Weyenberg (Weyenberg Shoe Mfg Co.). \$8.95. Good construction and material. Nationally available.

Hanan (Hanan and Sons, Inc.). \$10.75. Excellent construction and good material. Nationally available.

Hanan (Hanan and Sons, Inc.). \$7.95. Excellent construction and fair material. Nationally available.

Regal (Regal Shoe Co.). \$6.60. See "Best Buys."

Penney (J. C. Penney Stores). \$6.90. See "Best Buys."

Jarman (General Shoe Corp.). \$8.85. Good construction and material. Nationally available.

Whitehouse and Hardy (Johnston and Murphy). \$22.50. Good construction and material. Nationally available.

London (London Character Shoes Corp., NYC). \$8.95. Good construction and material. Available in New York metropolitan area.

Bostonians (Commonwealth Shoe and Leather Co.). \$8.95. Good construction and material. Nationally available.

Whitehouse and Hardy (Johnston and Murphy). \$14.50. Good construction and material. Nationally available.

Crosby Square (Mid-States Shoe Co.). \$6.44. Fair construction and excellent material. Nationally available.

Walk-Over (George E. Keith Co.). \$7.95. Good construction and fair material. Nationally available.

Roblee (Brown Shoe Co.). \$5.99. Fair construction and good material. Nationally available.

Douglas (W. L. Douglas Shoe Co.). \$8.50. Good construction and fair material. Nationally available.

Thom McAn (Melville Shoe Corp.). \$4.20. See "Best Buys."

London Imperial (London Character Shoes Corp., NYC). \$5.95. Fair construction and good material. Available in New York metropolitan area.

Towncraft (J. C. Penney Stores). \$4.79. See "Best Buys."

Sears (Sears Roebuck and Co.). \$6.20 plus postage. Fair construction and material. Available by mail order.

ACCEPTABLE—CONT'D

Johnson and Johnson (Endicott Johnson). \$5.00. Fair construction and material. Nationally available.

Jarman (General Shoe Corp.). \$5.85. Fair construction and good material. Nationally available.

Gallen Kamp's (J. F. McElwain Co.). \$4.85. Fair construction and material. One of three pairs tested had a paper heel lift which is "Not Acceptable." Available on the West Coast.

French A/C Combination (French, Shriner, and Urner). \$6.75. Fair construction and material. Nationally available.

Douglas (W. L. Douglas Shoe Co.). \$6.50. Fair construction and good material. Nationally available.

A. S. Beck (Diamond Shoe Corp.). \$4.99. Fair construction and material. Available in A. S. Beck stores East of the Mississippi.

Hanover (The Hanover Shoe, Inc.). \$4.95. Fair construction and material. Nationally available.

Sears' Briargate (Sears Roebuck and Co.). \$3.65. plus postage. Fair construction and material. Available by mail order.

Kinney's Style-Craft (G. R. Kinney Co., Inc.). \$3.95. Fair construction and good material. One of the three pairs tested had a paper heel lift which is "Not Acceptable." Nationally available.

Douglas (W. L. Douglas Shoe Co.). \$5.50. Fair construction and material. One of the three pairs tested had a paper heel lift which is "Not Acceptable." Nationally available.

NOT ACCEPTABLE

The following shoes are considered to be "Not Acceptable" because of poor construction features which affect the wearing quality of the shoe.

French, Shriner, and Urner Custom Grade, French, Shriner, and Urner). \$13.50. This shoe would be listed among the top five shoes tested except that the heel lifts in two of the three pairs of shoes examined were made of paper.

Ward's Pinehurst (Montgomery Ward). \$5.50 plus postage. This shoe would be a "Best Buy" in the group selling for less than \$6 per pair except that the heel lifts in two of the three pairs tested were made of paper.

(Continued next page)

NOT ACCEPTABLE—CONT'D

National (National Shoe Mfg. Co., Inc.). \$4.65. Heel lifts made of paper.

Weyenberg Olympic (Weyenberg Shoe Mfg. Co.). \$5.95. Heel lifts in two of the three pairs tested were made of paper.

Ward's (Montgomery Ward). \$2.00 plus postage. Generally poor quality. Shoe had a paper insole.

MEN'S SHIRTS

On a properly fitted shirt the top of the sleeve should start at the end of the wearer's shoulder bone. The sleeves should be cut so that the threads of the material run parallel with the fold at the top of the sleeve when the shirt is laid flat. If the sleeve is pieced, the wearability of the shirt is not impaired, provided the sleeve is cut to proper size and is properly set.

The edge of the placket at the cuff should be bartacked to prevent tearing under normal strain. The placket should be large enough to allow the cuff to be laid flat without strain when ironed. Some higher priced shirts have very large plackets with an extra button and buttonhole to keep them closed.

The seam at the bottom of the yoke should be curved slightly downward from the center to allow for movement of the shoulders. Generally only the poorest shirts have straight seams.

While the War Production Board has forbidden the use of bi-swing or box pleat backs, pleats to give the shirt normal fullness in the back are permissible and should be present. They should be distributed along the entire yoke or concentrated on each side of the shirt at the shoulder blade area, not bunched in the center where they are of little use.

WPB has also limited the length of shirts to 30 inches in shrunk and $3\frac{1}{2}$ inches in unshrunk material. This is a reduction of three inches, but shirts should still be long enough for most men.

Men with shorter than average necks should be careful to get collars of correct height. A high collar on a short neck looks ungainly, is uncomfortable and tends to wear rapidly at the collar fold.

Collar points should lie flat and should be evenly stitched. The pressure required to iron an uneven collar impairs its strength.

Permanently stiffened collars need no starching and

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resist wilting. But they must be made of heavier material than the rest of the shirt if they are not to wear out quickly at the collar fold. When buying shirts with permanently stiffened collars, ask for guarantees of their lasting qualities.

Stitching in the shirt should be even and neat with no hanging threads. Collar, cuffs and front panels should have at least 19 stitches to the inch. If the button or buttonhole panel is lined, the lining should be of the same material as the rest of the shirt. A different material may shrink differently and pucker the front.

Lustrous pearl buttons, even in thickness all around and firmly attached, indicate good quality. Buttonholes should have no loose or rough edges and should be reinforced with a small bar tack at each end to prevent raveling.

Fabric: The quality of broadcloth is largely determined by its thread count (number of threads per inch). Other properties being equal, the higher the count the better the fabric. Good quality broadcloth has a count of 144 to 150 in the warp and 76 to 80 in the filling as the material comes from the loom. Medium quality broadcloth has a warp count of 130 to 140 and a filling count of 60 to 68. Low quality broadcloth, generally used on "competition" merchandise, ranges from 100 to 116 in the warp, from 56 to 60 in the filling.

Broadcloth with one-ply yarns in both warp and filling, i.e. 1x1 broadcloth, is used for most shirts. "2x2" broadcloth, with two-ply threads (two threads twisted together) in both directions, is generally used for the more expensive shirts. It improves the appearance of the shirt but adds little to durability.

Most shirts sold today are preshrunk, which makes for better fit before and after laundering.

Tests of the nine brands of khaki shirts available in retail stores indicated that it is best to have a soldier buy his own shirts through regular Army sources. These are apt to be more closely inspected than what you can buy for him.

See the *Reports* February 1944 for ratings of men's shirts.

MEN'S SHORTS

Considerable skimping was noted in many brands of both woven and knit shorts. Shorts with elastic in the waist-band are no longer being manufactured.

(Continued next page)

Woven shorts have increased in price an average of 10¢ a pair. The fabrics most often used in making them are solid and woven pattern broadcloths, cotton prints and madras. Oxfords and sateens are occasionally found, but the latter are not so strong as other fabrics, and the former are very heavy. Broadcloths and woven stripes are more expensive than printed cottons but are generally stronger. White broadcloths are usually stronger than solid-colored broadcloths at the same price. There are, however, many printed fabrics which are quite strong and, being cheaper than broadcloths or woven madras, make very good buys.

If you cannot get printed shorts labeled "vat dyed," buy solid colored or white broadcloths. Colored fabrics which are not vat dyed should be washed separately so that other garments will not be stained if colors run.

Construction: Waistbands are made with French backs with adjustable tabs or with tie sides with draw-the choice is a matter of personal preference.

Gripper fasteners are much more satisfactory than pearl buttons of the quality generally used on men's shorts, but they can probably be found only on old stock. If gripper fasteners are not available, synthetic buttons are preferable to cheap pearl ones.

Seams should be sewn with neat, close stitches. Buttonholes should be well made with tight stitching, and bar-tacked to prevent raveling. The fly opening should be bar-tacked at the bottom, or both sides should be made of one piece of cloth.

Woven shorts were tested for thread count, weight of cloth, tensile strength and resistance to abrasion. They were examined for defects in construction which would affect wear and comfort, for number of stitches per inch in the seams and for presence of seams in the crotch, a construction feature which may cause much discomfort in use. Fit and shrinkage were also considered in the ratings. No samples shrank excessively, but a number shrank to some extent. One or two samples of each brand were tested.

Knit shorts are available in three types: briefs, which are cut sharply from hip to crotch; thigh length; knee length. They are generally made of cotton in a flat or plain knit, a 1x1 rib or a 2x2 rib. Sometimes varied rib-

bing is used, or a combination of flat and rib knit or of mesh with different types of knit. The flat knit and the 1x1 rib are apt to wear longest because they have the greatest resistance to abrasion. But 2x2 or higher ribs can fit more snugly without binding, because they have greater elasticity.

Knit shorts should be long enough to fit comfortably over the hips and wide enough at the waist and leg openings to prevent binding. Now that elastic waistbands have been replaced by plain webbing with button closure at the sides, it is important to see that the waistline is the correct size. All seams should be stitched so that they can be stretched fully without tearing. The width of the inseam (the bottom of the crotch) should be at least six inches.

Only briefs were included in CU's tests.

From the *Reports*, January and February 1943.

WOVEN SHORTS

BEST BUYS

The following shorts were judged to offer the best value for the money in the order given.

Leeds (Schulte Cigar Stores). 35¢. Printed broadcloth.
Craftsman (J. C. Penney Stores). 39¢. Printed broadcloth.

ACCEPTABLE

(In estimated order of quality. Note that each rating applies only to the type of material mentioned)

Hardwick (The Bon Marché Dep't Store, Seattle). \$1. White broadcloth.

Kempton (R. H. Macy & Co., NYC). 94¢. White oxford.
BVD (The BVD Co., NYC). \$1. White broadcloth.

Varsity (Excelsior-Varsity, Baltimore). \$1. White broadcloth.

AMC (Associated Merchandising Corp.¹). \$1.15. White broadcloth.

Halle Bros. (Halle Bros., Cleveland). \$1. White broadcloth.

Leeds. (See "Best Buys.")

Kaufmann's (Kaufmann's Dept. Store, Pittsburgh). 89¢.
 White broadcloth.

Ringsider (Wilson Bros., Chicago). 75¢. White.

¹ For list of AMC stores, see page 10.

(Continued next page)

ACCEPTABLE—CONT'D

Halle Bros. (Halle Bros.). \$1. Woven madras.

Craftsman (See "Best Buys.")

Marshall Field (Marshall Field & Co., Chicago). 75¢. White broadcloth.

Arrow (Cluett Peabody & Co., NYC). 75¢. White oxford.

Townsman (Hale Bros., San Francisco). 55¢. Printed broadcloth.

Breex (Munsingwear Co., Minneapolis). 75¢. White broadcloth.

Mansco (Manhattan Shirt Co., NYC). 75¢. White broadcloth.

Arrow (Cluett Peabody & Co.). 75¢. Woven madras.

Surety (The May Co., Los Angeles). 55¢. White broadcloth.

Fruit of the Loom (Fruit of the Loom, Inc., Providence, R. I.). 39¢. White broadcloth.

Super Seat (Wilson Bros.). 75¢. White broadcloth.

Short-eez (Superior, Inc., Piqua, Ohio). 65¢. Green broadcloth.

Super Seat (Wilson Bros.). 75¢. Woven madras.

Conway (Marshall Field & Co.). 55¢. Printed broadcloth.

Fruit of the Loom (Fruit of the Loom, Inc.). 39¢. Printed broadcloth.

BVD (BVD). 65¢. Woven madras.

Seamont (W. T. Grant Co. Stores, NYC). 49¢. Printed broadcloth.

Darwood (The J. L. Hudson Co., Detroit). 85¢. White broadcloth.

Surety (The May Co.). 55¢. Printed broadcloth.

Varsity (Excelsior-Varsity). \$1. White broadcloth.

Manhattan (Robert Reis & Co., NYC). 45¢. White broadcloth.

Hardwick (The Bon Marché Dep't Store). \$1. Woven madras.

Mansco (Manhattan Shirt Co.). 75¢. Woven madras.

Wearite (W. T. Grant Co. Stores). 39¢. White broadcloth.

Yachtsman (The J. L. Hudson Co.). 39¢. Printed broadcloth.

Healthgard Supreme Quality Cat. No.—452 (Montgomery Ward & Co.). 69¢ plus postage. Woven madras.

ACCEPTABLE—CONT'D

Breex (Munsingwear Co.). 55¢. Woven madras.
 Kaufmann's (Kaufmann's Dep't Store). 89¢. Woven
 madras.
 Ringsider (Wilson Bros.). 75¢. Printed broadcloth.
 Otis (Otis Underwear Co., NYC). 45¢. Printed broad-
 cloth.
 Otis. 49¢. White broadcloth.

NOT ACCEPTABLE

The following shorts were "Not Acceptable" because of excessive skimping.

Kempton (R. H. Macy & Co., Inc.). 94¢ Woven madras.
 Arrow (Cluett Peabody & Co.). 75¢. White broadcloth.
 AMC (Associated Merchandising Corp.¹). \$1. Woven
 madras.
 Darwood (The J. L. Hudson Co.). 65¢. Printed broad-
 cloth.
 Marshall Field (Marshall Field & Co.). 75¢. Printed
 broadcloth.
 Short-eez (Superior, Inc.). 65¢. Woven madras.
 Manhattan Clix (Robert Reis & Co.). 45¢. Printed broad-
 cloth.
 Woolworth's (F. W. Woolworth Co.). 29¢. Printed
 broadcloth.
 Woolworth's. 35¢. Printed broadcloth.
 S. S. Kresge's (S. S. Kresge Co.). 29¢. Printed broad-
 cloth.

KNIT SHORTS

BEST BUY

The following brand was considered to offer the best value for the money.

Fruit of the Loom (Fruit of the Loom, Inc., Providence).
 39¢. 1x1 rib.

ACCEPTABLE

(In approximate order of quality)

Ward's Speed Cat. No.—484 (Montgomery Ward & Co.).
 69¢ plus postage. 1x1 rib.
 Fruit of the Loom. (See "Best Buy.")
 Reis Scandal (Robert Reis & Co., NYC). 60¢. 1x1 rib.
 Jockey (Cooper's Inc., Kenosha, Wisc.). 60¢. 1x1 rib.
 Sears' Pilgrim Nobility Cat. No.—5107 (Sears, Roebuck

¹ For list of AMC stores, see page 10.

ACCEPTABLE—CONT'D

& Co.). 65¢ plus postage. A 1x1 rib on the front and back with a fancy mesh and a 1x4 rib on the sides. Crotch had a lastex insert.

Club Fellow (Marshall Field & Co., Chicago). \$1. A 2x2 rib on the side, with a 1x1 rib on front and back.

Macy's Kempton (R. H. Macy & Co., Inc., NYC). 69¢. 1x1 rib.

Carter's (William Carter Co., Needham Heights, Mass.). 60¢. 1x1 rib.

Wearite (W. T. Grant Co., NYC). 35¢. 2x2 or 1x1 rib.

Wilson's Cutaways (Wilson Bros., Chicago). 65¢ 2x2 rib.

NOT ACCEPTABLE

The following shorts were considered to be "Not Acceptable" because of excessive skimping in size dimensions.

Mr. Trent (Hale Bros.). 65¢. 1x1 rib.

Penney's (J. C. Penney & Co.). 35¢. 1x1 rib.

Wedgefield (S. S. Kresge Co.). 29¢ 1x1 rib.

Le Savoy (F. W. Woolworth Co.). 25¢. 2x2 rib.

Otis (Otis Underwear Co.). 45¢. 1x1 rib, or a combination of 2x2 and 1x2 rib.

Leeds (Schulte Cigar Stores). 35¢. 1x1 rib.

MEN'S SUITS

Suits (other than tropical weights) selling for less than \$22.50 are, for the most part, badly made with poor material, and are not worth buying. Paying a few dollars more may result in increased wearability and appearance out of all proportion to price. But beyond about \$50, you get little or nothing in the way of extra durability; rather you get the better appearance which results from hand tailoring.

If you are easy to fit, ready-made clothes offer better values than those which are made-to-order. But a ready-made garment that requires extensive alteration is not worth buying at any price. If some alterations are needed, it is always better to alter from a larger size to a smaller one, otherwise (especially on fabrics which contain rayon) needle holes may show where seams have been let out, and seams may become so skimpy that they will pull out.

Jackets should require no more than minor alterations: insertion or removal of shoulder padding, length-

ening or shortening of sleeves, raising or lowering of collar, etc. Any other shoulder or armhole alterations may throw the coat out of balance, so that it will never fit well, unless the work is done by an expert—and usually costly—fitter.

Before you try on a jacket, lay it on a table. The garment should not lie flat; it should show the "drape." The front of the coat should be soft, not stiff. When you try on the coat, see how it fits before you button it. Sometimes unnecessary alterations can be avoided merely by moving the buttons.

The lapel edges should tend to curl down, not up. The collar should cling snugly to the neck and shoulders, with no puckering along the crease line. The sleeve vent (the slit of the sleeve at the wrist) should not curl out. The edges of the coat should be straight and parallel and should not curl; the machine stitching here (if the coat has a stitched edge) should be as close to the edge as possible. Avoid cheaper garments with an unstitched edge. All edges should be thin on a good garment. Poorer suits, which have several thicknesses of material at the edge, will be stiff and will not drape properly. The pockets should not gape open or lap over, and the flaps should lie flat at the corners.

The lining of the coat should be loose, but not so loose that it is bulky. The yoke lining (across the shoulders) should be loose, not strained; the sleeve lining should be set in evenly without puckering. On a good coat, the inside breast pocket should extend beyond the lining and into the facing of the cloth.

Skillful hand sewing is preferable to machine sewing on many details, but strong machine stitching is preferable to poor hand work. Regardless of whether it is done by hand or by machine, the stitching should be straight, smooth and flat, and the stitches should be small and regular, as inconspicuous as possible.

Handmade buttonholes are better than those made by machine only if they are soft; too stiff a buttonhole spoils the drape of the coat. Buttons should be hand-sewn, with at least four single strands of thread through each hole. They should have long necks with smooth, regular winding. The cloth should not be puckered where the buttons are attached; if the fabric is thin or

loosely woven, buttons should be backed either with another button or with a concealed cloth stay.

Seams should be sewed straight, and firmly pressed open. They should lie flat and be inconspicuous from the outside, with no impression marks as a result of the pressing.

Trousers should fit without alteration except for adjustment of length.

The lining material should be soft and of good quality; the lining should not be skimpy. Pockets should be of strong material, deep and roomy; they should not gape open. The raw edge of the lining should be inside the pocket.

Buttons which are machine-sewn are sturdier than those which are sewn on by hand. Belt loops should be securely tacked at top and bottom, rather than turned into the waistband for reinforcement. They should be strong and smooth.

Vests should be long enough, both front and back, to keep the shirt from bulging out. If a belt is worn, the vest should cover the belt buckle; with suspenders, the vest should cover the belt loops.

Except on very high-priced garments, buttonholes on vests are machine made. Look for close, even stitching on them.

The neckline on better vests is hand-finished, both front and back. The neckline should fit close, so that it does not show above the collar of the suit, and doesn't drop below the shirt collar.

Fabric: There are two types of woolens: worsted and plain woolen. The former (including serge, gabardine, whipcord, elastique, semi-finished worsted, unfinished worsted, clear-finished worsted, worsted cheviot, worsted flannel, doeskin, sharkskin) is smoother and firmer than plain wool (including Shetland, tweed, covert, wool cheviot, wool flannel). Worsted fabrics tend to wear better than woolens, though woolens are often more expensive. It is particularly important, in woolens, that the trousers be roomy, otherwise they will wear through rapidly.

Read the label carefully before you buy a suit. By law, the virgin wool content and the content of reused and reprocessed wool must be stated on the label. Though good

grades of reused and reprocessed wool are as good as poorer grades of virgin wool, it is impossible for the layman to judge the quality of these fibers. It is safer, therefore, to buy a suit made entirely of virgin wool. Worsted woolen material can be made only of virgin wool.

Yarns which are plied or twisted together are likely to wear better than fabrics made from untwisted yarns. Cloth with a firm, smooth surface is usually made of yarn having a high twist. Take a thread from the bottom of the pants or from a seam to examine the twist.

Cloth that feels sleazy is likely to wear poorly. Hold an unlined portion of the garment up to the light. Material which lets considerable light pass through is not likely to wear well.

Look out for decorative yarns, made of rayon. They often wear through before the rest of the material, and you may have to discard an otherwise good garment because the worn decoration makes it look shabby.

The amount of nap a cloth has depends on the way in which it is finished. Unfinished worsteds have a nap which eventually wears off; these do not become shiny with wear, but the nap tends to pick up bits of lint and dirt. Clear-finished worsteds have no nap, but they become shiny rapidly. Most woolens have a nap or fuzz. Avoid those with a very high nap or no nap; the former tends to form little "pills" of wool which cling to the surface; the latter often wear through quickly.

Care of suits: The following rules will help you to obtain maximum wear.

1. Do not wear a suit more than one or at the most two days in succession.
2. Clothes should be hung neatly on hangers when not being worn.
3. Moths prefer dirty clothes. Keeping yours brushed and clean helps to keep moths away.
4. Missing buttons, tears, holes, etc., should be taken care of immediately. Irreparable damage often results when they are neglected.
5. Do not put heavy or bulky objects in pockets.
6. It is not good practice to keep clothing in a dark warm closet for long periods of time. It should be aired in sunlight periodically if not worn regularly.

From the *Reports*, February 1943.

MEN'S Undershirts

Knit undershirts come in various kinds of flat (plain) and rib knits. In general the flat knits and the 1 x 1 ribs show greater resistance to abrasion than the 2 x 2 ribs. The higher ribs (5x5, 6x6, etc.) show least resistance. The higher ribs, however, may prove to be more comfortable since they have greater elasticity.

All of the shirts tested conformed fairly well to size specifications. Slight deviations from size were more than compensated by the flexibility of the fabric, and proper fit both before and after washing would be found in any of the shirts tested.

When buying, check to see that the back label is not attached in such a way that normal stretching may tear the material of the shirt. If the label is sewn firmly across the ribbed portion, without allowance for "give," rip out a few of the stitches which hold down the bottom of the label before putting the garment into use.

Differences in strength were found among the various brands tested, but these bore no relationship to price.

Note that a given brand name frequently appears in various places in the listings below with different weaves of the same brand receiving different ratings. Be sure to check the type of weave before you make a purchase based on these ratings.

From the *Reports*, February 1943.

BEST BUYS

The following undershirts were judged to offer the best value for the money in the order given.

Woolworth's (F. W. Woolworth Co.). 29¢. 1 x 1 rib.

Available in Woolworth stores.

Le Savoy (F. W. Woolworth Co.). 25¢. 3 x 2 rib.

ACCEPTABLE

(In estimated order of quality)

Super-quality (Bon Marché Dep't Store, Seattle, Wash.). 55¢. 2 x 2 rib.

AMC (Associated Merchandising Corp.¹). \$1.25. Plain knit.

Macy's Kempton (R. H. Macy & Co., NYC). 69¢. 2x2 rib.

Woolworth's (see "Best Buys").

Mr. Trent (Hale Bros., San Francisco). 65¢. 1x1 rib.

¹ For a list of AMC stores, see page 10.

ACCEPTABLE—CONT'D

Vassar (Vassar Co., Chicago). \$1. Plain knit.

Manhattan (Robert Reis & Co., NYC). 45¢. 2x2 rib.

Varsity (Excelsior Varsity Underwear Co., Baltimore). 65¢. 2x2 rib.

Le Savoy (see "Best Buys").

Fruit of the Loom (Fruit of the Loom, Inc., Providence). 39¢. 2x2 rib.

Ward's Cat. No. 44B (Montgomery Ward). 69¢ plus postage. 2x2 rib.

Carter's (William Carter Co., Needham Heights, Mass.). 60¢. 1x1 rib.

AMC (Associated Merchandising Corp.¹⁾). \$1.25. 2x2 rib.

Club Fellow (Marshall Field, Chicago, Ill.). \$1. 2x2 rib.

Munsingwear (Munsingwear Co., Minneapolis). 75¢. 1x1 rib.

Leeds (Schulte Cigar Stores). 35¢. 1x1 rib.

Wearite (W. T. Grant Stores). 35¢. 2x2 rib.

Otis (Otis Underwear Co., NYC). 45¢. Plain knit.

Arrow (Cluett Peabody & Co., NYC). 75¢. 2x2 rib.

Certifit (S. S. Kresge Stores). 39¢. 2x2 rib.

Munsingwear (Munsingwear Co.). 75¢. 6x6 rib.

Leeds (Schulte Cigar Stores). 35¢. 1x1 rib, with a combination of 1x2, 1x1 and 1x2 every two inches.

Wearite (W. T. Grant Stores). 35¢. 1x1 rib.

Cavalier (Kaufman's Dep't Store, Pittsburgh). 89¢. 1x1 rib.

Ward's Healthgard Cat. No. 456 (Montgomery Ward). 35¢ plus postage. 2x2 rib.

Wedgefield (S. S. Kresge Stores). 25¢. 1x1 rib.

Cavalier (Kaufman's Dep't Store). 89¢. 2x2 rib.

Penney (J. C. Penney Stores). 35¢. 2x2 rib.

Macy's (R. H. Macy & Co.). 94¢. 1x1 rib.

Marshall Field's (Marshall Field & Co.). \$1.25. Plain knit.

Craftsman (J. C. Penney Stores) 50¢. 2x2 rib.

Arrow (Cluett Peabody & Co.). 60¢. 1x1 rib.

Mansco (Manhattan Shirt Co., NYC). 65¢. 1x1 rib.

Superior Shirteez (Superior Underwear Co., Piqua, Ohio). \$1. 2x2 rib.

BVD (BVD Co., NYC). 65¢. 1x1 and 2x2 mixed rib.

Sears' Pilgrim Cat. No. 5162 (Sears-Roebuck). 36¢ plus postage. 2x2 rib.

Surety De Luxe (The May Co., Los Angeles). 55¢. 2x2 rib.

(Continued next page)

144 MEN'S Undershirts, Raincoats

Mansco (Manhattan Shirt Co.). 65¢. 2x2 rib.

Otis (Otis Underwear Co.). 45¢. 7x6 rib.

Arrow (Cluett Peabody & Co.). 60¢. 7x6 rib.

Yachtsman (J. L. Hudson Co., Detroit, Mich.). 39¢. 2x2 rib.

Wilson Brothers (Wilson Bros., NYC). 55¢. 2x2 rib.

BVD (BVD Co.). 65¢. A mixture of 6x3 and 2x2 rib.

RAINCOATS

A raincoat may be water-repellent ("showerproof") or waterproof. Water-repellent coats are treated to make their fibers water-resistant without closing the pores of the fabric. Therefore they provide better ventilation and can be tailored better than waterproof coats. They will shed water well except in heavy rain, provided they are not exposed too long. But only a few of the showerproof coats on the market are guaranteed to retain their water-repellent qualities after dry cleaning or washing.

A coat which has lost its water-repellent qualities in cleaning can usually be reprocessed for about \$2. Zelan treatment, applied to the cloth before manufacture into the finished garment, provides permanent waterproofing. It appears highly satisfactory.

Waterproof coats can be made either of rubber sheeting or synthetics like pliofilm or of fabrics coated with rubber or oil. At the present time, no rubber sheet or pliofilm coats are being produced.

While the fabric of waterproof coats will not allow water to come through, the seams will, unless they are taped. The taping should be applied in the same manner as a patch on a tire tube; water can penetrate stitch holes. Reversible coats which can be worn as a raincoat on one side and as a topcoat on the other generally have seams which are not taped.

If the pockets are made to allow access to jacket or pants, a sufficient overflap should be present so that water will not get through. Buttons or other fasteners should keep the bottom of the coat from flying open. The coat should be roomy and should have adequate provision for ventilation under the arms.

Rubberized coats are heavier than oiled fabrics, and stronger. A rubberized coat made with the rubber

between two layers of fabric will last longest. Those with the rubber on the outside crack under prolonged exposure to sunlight.

When buying either type of raincoat, look for the following:

1. Complete waterproofing where that is desired—taped seams and a fabric which shows no unfilled spaces between the threads when held up to the light.
2. A comfortable size, which will allow an extra garment underneath for warmth when necessary.
3. A well-proportioned cut which includes particularly a wide enough skirt and an ample overlap.
4. A collar which fits smoothly at the back of the neck.
5. Buttons which are firmly attached to a double thickness of fabric.
6. Big enough pockets with slits that afford convenient access to trouser pockets.
7. Yoke linings, which strengthen the garment across the shoulders, where the greatest strain occurs.

Reasonable care of raincoats will prolong their life considerably. Keep them away from excessive heat, and make sure they are dry and the fabric smoothed out before they are put away. Rubberized coats should never be hung on a shoulder hanger. Hang them to a hook by the hanger sewn in the coat.

Any breaks which occur in the lightweight fabrics should be mended immediately to preserve the coat from complete ruin. Neither sewing nor adhesive tape is satisfactory. The strongest and least conspicuous mend that CU could find was obtained by applying a piece of the coat fabric itself (taken from the hem) under the tear with rubber cement.

SHEETS

Manufacturers now grade and label sheets according to minimum standards for thread count set by OPA. Thus, muslins are "Type 128" (heavy) and "Type 140" (medium), and utility percales are "Type 180." The type number refers to the number of threads per square inch. True percales, with more than 180 threads per square inch, are considered a luxury item and are not covered by OPA regulations; they are merely labeled "Percale." OPA has also ruled that sheets which are

defective in certain respects must be labeled seconds and sold at a 10% discount. But the regulation does not apply to labeling of sheets sold at retail, and some retailers remove the grade label. Sheets should be examined carefully for these features:

"Hand" or feel—determined mainly by thread count. Percale sheets, with fine yarns woven very close together, are smoothest and lightest in weight. Muslins, woven of fewer, coarser threads, are heavier. Percales are priced higher than muslins, but if you pay for laundry by the pound, the lighter weight of percales probably makes them better economy in the long run. Heavy muslins will outwear any other grade.

Weave. Good sheets are woven with about the same number of warp (lengthwise) as filling (crosswise) yarns. Holding the sheet up to the light will give some idea of the balance of the weave. It will also help you judge whether a lightweight sheet is truly a percale with fine, tightly woven yarns or a sleazy weave with too few heavy yarns. Any sheet weighing less than three and one-half ounces per square yard is bound to wear poorly.

Construction. Sheets should have at least a one-quarter inch selvage on each side and firm hems at both ends. The sheets should be torn to size.

Sizing. Be sure that a smooth feel is not produced by excessive finishing material (sizing) which will wash out readily. Rub the sheet against itself; if a powdery material falls out, too much sizing is present.

Seconds. Inspect each sheet you buy for flaws in the weave, gashes, stains, etc., and insist on a 10% discount if you buy an imperfect sheet. Seconds may be good buys at reduced prices provided the flaws do not impair durability. But avoid seconds with threads missing or not caught in the weave, or looped threads, and don't buy sheets with such flaws as gashes, mildew stains or frayed selvages while anything else is available.

The following are some pointers to help make sheets wear longer:

1. Reverse the sheet each time you make the bed; that is, place the wide hem at the top of the bed one time, at the bottom the next.

2. Cover bare springs with heavy cloth.
3. Place a pad between the mattress and sheet.
4. Do not pull the sheet off the bed without first loosening the edges.
5. Wash sheets as soon as possible after taking them off the bed.
6. Do not crease sheets the same way each time they are ironed.
7. Place sheets on the bottom of the pile after laundering, so that all of your sheets are used.

As this goes to press, a new test on sheets is in progress. The results will appear in the January 1944 *Reports*.

STOCKING SAVERS

Various kinds of preparations designed to make stockings last longer are available. One type, a stocking rinse in which you dip your stockings after washing and then allow it to dry on the hose, is practically worthless. Made of a soluble salt and organic lathering agent, these rinses wash out, so that they must be used every time the stockings are washed.

There are several products intended to protect stockings against wear at particularly vulnerable points, such as the heel and toe. Suede cloth inserts for the heel of a shoe are designed to prevent the shoe from rubbing against the stocking at the heel. Perfumed cakes of paraffin are sold to protect the heel and toe. The paraffin is rubbed onto the stocking at these spots and provides a smooth protective coating. Common kitchen paraffin or a candle is just about as effective and much cheaper.

The protection afforded by any of these products is small. Inserts for the shoes are most effective, but they provide protection only for the heel.

To stop runs after they have occurred, special "run stop" preparations can be used. Those consisting of clear lacquer work fastest and do the neatest job. Clear nail polish or rubber cement can be substituted for lacquer and is cheaper.

From the *Reports*, September 1941.

UMBRELLAS

WPB has limited production of umbrellas to 30% of the 1941 production.

The quality of umbrellas is suffering from shortages. Silk fabric has given way to rayon or cotton; the latter

is the better buy for a durable umbrella, since rayon becomes weak when wet. Some of the coated fabrics, such as *Koroseal*, are likewise unavailable because of war needs. Plastics are taking the place of wood and metal. For handles and canes they should prove satisfactory, but ribs require springy metal for sufficient elasticity an' strength.

Here is what to look for when buying an umbrella:

1. It should open easily and snap into open position without too much pressure.
2. The joint where the stretcher (where the two metal pieces are held together) is attached to the rib should be smooth. If it is raised, a small piece of fabric should be inserted between the joint and the umbrella fabric.
3. The fabric should be closely woven and amply cut. Hold it to the light and look for sleazy weave or pin-holes; if skimped in size, it will be under excessive tension every time the umbrella is opened.
4. Coated fabrics like transparent oil silk or *Koroseal* (if you can get them) are satisfactory only if the basic weave of the material is strong. *Pliofilm* or other synthetic films do not give long wear.

From the *Reports*, November 1940.

WOMEN'S PANTIES

The three methods of marking women's panties — by small, medium and large designation; by waist size and by numbered size — showed no consistency between such size markings and actual measurements.

Don't buy panties by marked size; to guarantee correct fit, rely upon actual body measurements and compare them with actual size measurements of the panties.

There are few panties available with elasticized waists; adjustable buttons and button holes and draw strings are now being used. The material should allow stretching to the width necessary to pull the garment over the hips without tearing the sewing thread. If panties have elastic in the waist, the wearer's actual measurements should be about halfway between the waist measurement when stretched and when it is not. If there are buttons, there should be sufficient adjustment for snug, but not tight fit. If the waist has draw strings, they should be long enough to open the waist to fit over the hips without getting lost in the waist hem, and should tie without too much bunching at the waist.

If the panties fit, a combination of three factors will determine the wear they will give; closeness and type of knit, kind of fiber used, and general construction. A fourth specific factor might be added—crotch construction. Since the crotch is particularly subject to wear, examine it carefully for double thickness, or a single thickness of heavier material than the rest of the garment.

How resistant a fabric is depends upon the closeness and type of knit and the fiber used. The tighter the weave and the stronger the yarn, the stronger the knit and the more resistant the panties. Once the yarn is broken, the way it will run affects the wearing quality of the panties.

Plain knit garments, knit in the same manner as women's hosiery other than mesh, will *run up and down* once the yarn is broken. Although these knits will often give satisfactory wear if the original strength is high, they are the least desirable of all types.

One-in one-out rib knits, in which both sides of the material look alike, will *run in one direction only*.

Simple warp knits or one bar tricots likewise *run in one direction only*. They are improvements over the one-in one-out rib as it takes more strain to make them run.

Two bar tricots or *multiple knits* are the most desirable of all since they *do not run at all*. These are easily identified as the ribs at the back run at right angles to the ribs on the face.

Since rayons lose strength when wet, wash rayon panties carefully, without twisting or wringing them. Use warm, not hot water with neutral soap and dry flat. Iron while slightly damp using a warm, not hot iron. Acetate rayon should be ironed dry. Or better yet, don't iron.

The brands listed below are rated on bursting strength, resistance to abrasion, and examination of important construction features such as crotch, seams, type of knit, and vulnerability of sewing threads. All types of the same brand are listed together, with the types purchased noted; and brands are listed on the basis of a composite rating of all types tested. Where only one or two types were tested, the brand rating is not as positive as where more types were examined. In general, the listings represent approximate order of quality for the different brands rather than just for individual types of panties within a brand.

(Continued next page)

BEST BUYS

The following brands were judged to offer the best values for the money in the order given.

A-R-T. Briefs 29¢, panties 35¢. Both made of rayon, ran in one direction and had double crotch. Available in Woolworth stores.

Flawless. Panties 35¢. Made of rayon, ran in one direction, had double crotch. Available in Kress stores.

Blue Swan (Bell Knitting Corp., NYC). Bloomers 59¢, ran in one direction. Briefs 55¢, runproof. Briefs 49¢, ran in one direction. All made of rayon and had double crotch.

Forest Mills. *Forettes* bloomers 59¢. Made of cotton and rayon, ran in one direction, had single crotch of heavier material. Available nationally.

Blossom. Briefs 29¢. Made of rayon, ran in one direction, had double crotch. Runproof knit rayon panties 39¢, bloomers 59¢. Had double crotch. Available nationally.

ACCEPTABLE

(In estimated order of quality.)

Nu Eve. Runproof knit rayon panties or bloomers, \$1.17. Had double crotch. Available nationally.

A-R-T (See "Best Buys.").

Van Raalte. Panties or briefs 85¢. Made of rayon, had double crotch. *Petibar* panties made of runproof knit rayon. *Stryps* panties and briefs ran in one direction. Briefs 59¢, made of cotton and rayon, ran in one direction, had double crotch. Available nationally.

Blue Swan (See "Best Buys.").

Flawless (See "Best Buys.").

Forest Mills *Forettes* (See "Best Buys.").

Barbara Lee (Associated Merchandising Corp.). Briefs and panties \$1.15. Made of rayon, ran in one direction. *Aimcee* briefs 79¢. Made of rayon, ran in one direction, had double crotch. Available nationally in AMC stores.¹

Luxite. *Fil D'Or* bloomers \$1. Made of runproof knit rayon. Panties 79¢, panties and briefs 69¢, made of rayon, ran in one direction. All had double crotch. Available nationally.

Blossom (See "Best Buys.").

Munsingwear. Cotton and rayon bloomers 60¢. Ran in one direction. Runproof knit rayon panties and briefs \$1. All had double crotch. Available nationally.

Chanda. Runproof knit rayon panties \$1.08. Had double

¹ For a list of AMC stores, see page 10.

ACCEPTABLE—CONT'D

crotch. Available in Macy Department Store, NYC.

Dutchess. *Stryde Free* briefs and bloomers 69¢. Made of rayon, ran in one direction. Runproof knit rayon panties \$1.15, briefs 85¢. Cotton panties \$1, briefs, 79¢, ran in both directions. All had double crotch. Available nationally.

Penney. *Adonna* rayon briefs and panties 49¢. *Kels* rayon briefs 29¢. All ran in both directions, had double crotch. Available at J. C. Penney stores.

Fruit of the Loom. Runproof knit rayon panties and briefs 59¢. Had double crotch. Available nationally.

Vanity Fair. Runproof knit rayon panties \$1, bloomers \$1.15. Both had double crotch. Available nationally.

Sears'. Panties or briefs, Cat. No. 2607 and 2520. 38¢. Panties, Cat. No. 2536, 72¢. All made of rayon, ran in one direction, had double crotch, *Pilgrim Flatter-ees*. Runproof knit cotton briefs, Cat. No. 6911, 29¢, had double crotch.

Macy's. Cotton and rayon panties 54¢. Ran in one direction, had double crotch. Available at Macy Department Store, NYC.

Scamp. Briefs 39¢, made of rayon, ran in one direction, had double crotch. Available nationally.

Vogue. Runproof knit rayon panties 59¢. Had double crotch. Available nationally.

Carter's. Rayon and cotton bloomers and panties, 59¢. Ran in one direction, had double crotch. Available nationally.

Scandalettes. Runproof knit cotton and rayon briefs, 53¢. Had single crotch of heavy material. Available nationally.

Kayser. Panties and briefs 85¢. Panties \$1. Briefs 75¢. All made of runproof knit, had double crotch. Available nationally.

Vassarette. Rayon bloomers \$2. Ran in one direction, had single crotch. Cotton panties, \$1.50. Ran in one direction, had single crotch of heavy material. Available nationally.

C.M.O. (Chicago Mail Order Co., Chicago). Runproof knit rayon briefs Cat. No. S78, 39¢. Runproof knit rayon panties Cat. No. S50, 31¢. Had double crotch. Plus postage. Available from Chicago Mail Order Co. by mail order.

(Continued next page)

ACCEPTABLE—CONT'D

Princess May. Cotton bloomers \$1. Ran in one direction. Had single crotch of heavy material with a reinforced bottom. Cotton briefs 65¢. Ran in both directions and had single crotch of heavier material. Available nationally.

Virginia Lee. Rayon panties 59¢. Rayon briefs 35¢. Ran in one direction, had double crotch. Available nationally in McCrory stores.

Perkies. Runproof knit rayon briefs 54¢. Had double crotch.

Accordion Puffs. Rayon panties 49¢. Ran in one direction, had single crotch. Available nationally.

WOMEN'S SLIPS

Rayon slips are good substitutes for silk with respect both to appearance and durability. But check on the following details before you buy:

Fit: The slip should fit comfortably at the hips both when the wearer is sitting and standing. The top of the slip should be fitted to the bust and underarm without bulging or straining. This should not be too difficult with the wide range of available styles.

Get a slip that is the correct length; adjustment of the length by more than an inch or so at the shoulder straps throws the whole slip out of line. If regular sizes don't fit your proportions, get a size made especially for short or tall women, or make necessary length adjustments at the hem.

Construction: Slips which are bias-cut generally fit better and wear better than straight-cut slips. Four-piece skirt construction makes for a garment with less tendency to twist or ride up than skirts cut of fewer pieces.

Seams of bias-cut slips are generally stronger than those of straight-cuts, but on any seam, look for tight lockstitch; handsewn or fagotted seams are less durable.

If you get a slip with lace or other trimming at the top, see that the shoulder straps are firmly attached to the body of the garment rather than to the flimsier trimming. Keep in mind, too, that with such trimming, the problem of laundering and ironing may become unnecessarily complicated.

Material: Check the label to see whether the rayon used requires any special precautions in laundering. All rayon materials tend to be weak when wet. Never allow a slip to become so soiled that it cannot be washed by pressing suds through the material without rubbing. Use a mild neutral soap and lukewarm water. Rinse well, and squeeze (do not twist) out excess water, then wrap the garment in a towel or hang it in a cool spot away from direct heat or sunlight. Iron all except acetate slips while damp, on the wrong side of the fabric, using a warm but not hot iron. Acetate should be ironed when dry, on the wrong side.

Get a guarantee against shrinkage, to insure good fit after washing. And if the slip is colored other than pink or light blue, better get a guarantee of colorfastness, too.

True satin is generally stronger in tensile strength than crepe of the same weight, but not all rayons which look like satin have true satin construction. These so-called twill weaves are heavier than satins, and though they are strong, they are bulkier and less attractive.

Tests: The ratings which follow were based on CU's tests and examinations for thread count, weight, tensile strength, resistance to abrasion, strength of seams and strap attachment and shrinkage in washing. General construction features such as adjustability of the straps, number of gores, cut of the material (bias or straight), and conformity to marked size were also considered.

From the *Reports*, October, 1943.

SATINS

BEST BUYS

(The following brands of satin slips were judged to offer the best value for the money in the order given.)

Will O'Wisp (Valmor Undergarment Co.). \$1.97. Four-gore, bias cut; adjustable straps. True satin weave. Available nationally.

Fray Pruf (David Korn & Co.). \$2. Six-piece, bias-cut; adjustable straps. Fagoted seams. Twill weave. Available nationally.

ACCEPTABLE

(In estimated order of quality)

Will O'Wisp (see "Best Buys").

Fray Pruf (see "Best Buys").

(Continued next page)

ACCEPTABLE—CONT'D

Barbara Lee (Associated Merchandising Corp.¹). \$2.98. Four-gore, bias-cut true satin weave. Available at AMC stores.

New Form (Manhattan Undergarment Co.). \$2.98. Four-gore, bias-cut; adjustable straps. Fagoted seams. Twill weave. Available nationally.

Radelle (Sussberg and Feinberg, Inc.). \$3.98. Two-gore, bias-cut; $\frac{1}{2}$ -inch non-adjustable straps. Twill weave. Available nationally.

Barbizon Holebroke (Barbizon Corp.). \$2.50. Two-gore, bias-cut; non-adjustable straps. Twill weave. Available nationally.

Barbizon Joyce (Barbizon Corp.). \$2.25. Two-gore, bias-cut; $\frac{1}{2}$ -inch non-adjustable straps. Twill weave. Available nationally.

Kayress (Kayser Stores). \$2.25. Four-gore, bias-cut; $\frac{1}{2}$ -inch adjustable straps. Twill weave. Available nationally.

May Louise (May Co., Los Angeles). \$2.25. Eight-piece, bias-cut; adjustable straps. True satin weave. Available at May department store, Los Angeles.

Rhythm Romancer (Patricia Petticoat Co.). \$2.95. Two-gore, bias-cut; $\frac{1}{2}$ -inch adjustable straps. Twill weave. Available nationally.

Miss Swank (Miss Swank, Inc.). \$3. Four-gore; front and back bias-cut, side panels straight-cut; adjustable straps. Twill weave. Available nationally.

Barbizon Bryn Belle (Barbizon Corp.). \$1.98. Four-gore, bias-cut; non-adjustable straps. Twill weave. Available nationally.

Seamprufe (Aaronson-Caplin Co.). \$1.98.. Four-gore, bias-cut; adjustable straps. Twill weave. Available nationally.

Barbara Lee (Associated Merchandising Corp.¹). \$2.25. Four-gore, bias-cut; adjustable straps. True satin weave. Available at AMC stores.

Barbizon Prim Rite (Barbizon Corp.). \$1.98. Two-gore, straight-cut; non-adjustable straps. Twill weave. Available nationally.

Flexo-Seam (Aaronson-Caplin Co.). \$2.98. Two-gore,

¹ For list of AMC stores, see page 10.

ACCEPTABLE—CONT'D

straight-cut; adjustable straps. Twill weave. Available nationally.

Trillium Fine Fit (Tailored Silk Undergarment Co.). \$1.98. Four-gore; front and back straight-cut, side panels bias-cut; adjustable straps. Fagoted seams. True satin weave. Available nationally.

Mary Barron Biastrait (Davidson Bros.). \$1.98. Two-gore; straight-cut front, bias-cut back; adjustable straps. True satin weave. Available nationally.

Trillium Shar-Loo (Tailored Silk Undergarment Co.). \$2.25. Two-gore, bias-cut; adjustable straps. True satin weave. Available nationally.

Red Star (R. H. Macy & Co., NYC). \$1.54. Four-gore, bias-cut; adjustable straps. True satin weave. Available at Macy's department store, NYC.

Fray Pruf (David Korn and Co.). \$2.11. Two-gore, bias-cut; adjustable straps. Fagoted seams. True satin weave. Available nationally.

Fruit of the Loom (Fruit of the Loom, Inc.). \$1.29. Four-gore, bias-cut; adjustable straps. True satin weave. Available nationally.

Sears' Cat. No.—3706 (Sears Roebuck). \$1.29 plus postage. Four-gore, bias-cut; adjustable straps. True satin weave. Available by mail order.

Penney's (J. C. Penney Co.). \$1.98. Two-gore, bias-cut; adjustable straps. Fagoted seams. True satin weave. Available at Penney stores.

Miss Adorable (Vogue Lingerie Co.). \$1.29. Two-gore, bias-cut; adjustable straps. True satin weave. Available nationally at F. & W. Grand and H. L. Greene stores.

Miss Thrifty (Hale Bros., San Francisco). \$1.39. Eight-piece, bias-cut; adjustable straps. True satin weave. Available at Hale Bros., San Francisco.

Fruit of the Loom (Fruit of the Loom, Inc.). \$1.39. Four-gore, bias-cut; adjustable straps. True satin weave. Available nationally.

Strainless (Ralco Undergarment Co.). \$1.59. Two-gore, bias-cut; adjustable straps. True satin weave. Available nationally.

Sears' Cat. No.—3923 (Sears Roebuck). \$1.29 plus postage. Four-gore, bias-cut; adjustable straps. True satin weave. Available by mail order.

Miss America (F. & W. Grand Stores). 94¢. Two-gore.

ACCEPTABLE—CONT'D

bias-cut; adjustable straps. True satin weave. Available nationally at Grand and H. L. Greene stores.

Loomcraft Bodi-Mold (I. Schneierson and Sons). \$1.59.

Two-gore, bias-cut; adjustable straps. True satin weave. Available nationally.

CREPES**BEST BUYS**

(*The following brands of crepe slips were judged to offer the best values for the money, in the order given.*)

Miss Thrifty (Hale Bros., San Francisco). \$1.39. Eight-piece, bias-cut; adjustable straps. Available at Hale Bros. department store, San Francisco.

Fruit of the Loom (Fruit of the Loom, Inc.). \$1.29. Two-gore, bias-cut; adjustable straps. Available nationally.

Strainless (Ralco Undergarment Co.). \$1.59. Two-gore bias-cut; adjustable straps. Available nationally.

ACCEPTABLE

(*In estimated order of quality*)

Barbizon Marbury (Barbizon Corp.). \$2.25. Two-gore, bias-cut; $\frac{3}{4}$ -inch adjustable straps. Available nationally.

Fray Pruf (David Korn and Co.). \$2.11. Two-gore, bias-cut; adjustable straps. Fagoted seams. Available nationally.

Radelle Songette (Sussberg and Feinberg). \$2.98. Two-gore, bias-cut; adjustable straps. Available nationally.

Fray Pruf (David Korn and Co.). \$2. Six-piece, bias-cut adjustable straps. Fagoted seams. Available nationally.

Barbara Lee (Associated Merchandising Corp.¹). \$2.98. Two-gore, bias-cut; 1-inch non-adjustable straps. Available at AMC stores.

Penney's (J. C. Penney Stores). \$1.98. Two-gore, bias-cut; adjustable straps. Fagoted seams. Available at Penney Stores.

Miss Swank (Miss Swank, Inc.). \$3. Four-gore; front and back bias-cut, side panels straight-cut; adjustable straps. Available nationally.

¹ For list of AMC stores, see page 10.

ACCEPTABLE—CONT'D

New Form (Manhattan Undergarment Co.). \$2.98. Four-gore, bias-cut; adjustable straps. Fagoted seams, Available nationally.

Stainless (see "Best Buys").

Miss Thrifty (see "Best Buys").

Will O'Wisp (Valmor Undergarment Co.). \$1.97. Four-gore, bias-cut; adjustable straps. Available nationally.

Mary Barron Biastrait (Davidson Bros.). \$1.98. One-piece, bias-cut; adjustable straps. Available nationally.

May Louise (May Co., Los Angeles). \$2.50. Eight-piece, bias-cut; adjustable straps. Available at May department store, Los Angeles.

Fruit of the Loom (see "Best Buys").

Shar-Loo (Tailored Silk Undergarment Co.). \$2.25.

Two-gore; straight-cut front, bias-cut back; adjustable straps. Available nationally.

Barbizon Bryn Fair (Barbizon Corp.). \$1.98. Four-gore, bias-cut; non-adjustable straps. Available nationally.

Kayress (Kayser Stores). \$2.95. Two-gore, bias-cut; $\frac{1}{2}$ -inch non-adjustable straps. Available nationally.

Loomcraft Bilt-up (I. Schneierson and Sons). \$1.98. Four-gore, straight-cut; built-up shoulders. Available nationally.

Barbara Lee (Associated Merchandising Corp.). \$2.25. Two-gore, bias-cut; adjustable straps. Available at AMC stores.¹

Skinner's Radium (Cooperative Distributors, NYC). \$1.95. Four-gore, bias-cut; adjustable straps. Sold by Cooperative Distributors, NYC.

Seamprufe (Aaronson-Caplin Co.). \$2.25. Four-gore; front and back straight-cut, side panels bias-cut; adjustable straps. Available nationally.

Yolande (Lande and Miskind Co.). \$3.98. Two-gore, bias-cut; non-adjustable straps. Hand-sewn. Available nationally.

Barbizon Bryn Chic (Barbizon Corp.). \$2.50. Four-gore, bias-cut; non-adjustable straps. Available nationally.

Barbizon Shelby (Barbizon Corp.). \$1.98. Two-gore, bias-cut; non-adjustable straps. Available nationally.

Kayser (Kayser Stores). \$1.98. Four-gore, bias-cut; adjustable straps. Available nationally.

¹ For list of AMC stores, see page 10. (Continued next page)

ACCEPTABLE—CONT'D

Trillium Trilco (Tailored Silk Undergarment Co.). \$2. Two-gore, bias-cut; adjustable straps. Available nationally.

Miss America (F. & W. Grand Stores). 94¢. Two-gore, bias-cut; adjustable straps. Available at F. & W. Grand and H. L. Greene stores.

Miss Adorable (Vogue Lingerie Co.). \$1.29. Four-gore, bias-cut; adjustable straps. Available at F. & W. Grand and H. L. Greene stores.

WOMEN'S WORK CLOTHES

Comfort and safety are the watchwords in work clothes for women. Clothing must be so made that it allows for freedom of action, with no loose ends to catch in moving machinery. Fabrics must be durable and protective. Shoes must protect the feet and minimize fatigue. Headwear must protect the hair and keep it out of the machinery. In addition to this, women demand at least a minimum of style. Stylists have cooperated with government agencies, industrial designers and manufacturers.

Many varieties of work clothes are available; the type you select must depend on the kind of job you do. Some factories supply the necessary work clothing; where this is not done, the foreman of the department where you work can often give practical advice. The most popular types include coveralls, coverettes, overalls, work pants and slacks, culottes, hooverettes and smocks.

Whatever their style, work clothes should be made of cotton, pre-shrunk to insure as good a fit after washing as before, and densely woven. When it is held up to the light, the little light that shines through should show as small, even pin points. Lightweight materials should have a high thread count (many threads per inch); heavy materials may be of medium thread count.

For long wear, work clothes should be well sewn and well reinforced. Here are some points to look for:

Pockets firmly stitched, with the corners single or double bartacked to prevent tearing; back pockets reinforced at the bottom with a double thickness of cloth.

Adjustment straps attached so that they'll stay, with bartacking or double stitching at the line of attachment.

Fly opening (if pants are so made) with enough buttons to prevent gaping.

ACCEPTABLE—CONT'D

Buttons made of metal or rubber, so that they will not break in laundering.

Buttonholes with close, firm stitching and with both ends bartacked to prevent ravelling.

Belt loops bartacked both top and bottom; though they are almost as sturdy if the top of the loop is inserted into the top seam of the trousers. There should be from five to seven belt loops on trousers.

Seams—especially on heavier types of materials, such as denims, corduroys, gabardines, twills, poplins and drills—sewn with a double line of stitches with about ten stitches to the inch.

Laundering: The life of work clothing will be prolonged if it is washed often. When soil and grease become imbedded in the fabric and are allowed to remain there, they weaken the fibers. Besides this, the dirtier the clothing, the harder it must be scrubbed to get it clean; which also weakens material.

From the *Reports*, May 1943.

WORK PANTS

The label of work pants should indicate that they have been pre-shrunk and should state the weight of the material. Eight-ounce denim is the most popular fabric for factory workers' pants; farmers and workers in heavy industry usually prefer ten-ounce denim. (Weights are of a piece of cloth 36 by 28 inches.)

The following points of construction are important: Pockets should be well-sewn, their ends finished with single or double bar tacks or rivets. Bottoms of the back pockets should be reinforced with double fabric.

Seams should be sewn with two rows of stitches.

There should be a strap at the back of the pants for adjusting the waist; it should be riveted or double stitched at the lines of attachment.

There should be four buttons at the fly, riveted on, according to a WPB order. If suspender buttons will be used much, they too should be riveted. Buttonholes should be tightly sewn; the edges of buttonholes and the bottom of the fly should be bar-tacked. Six to eight belt loops are necessary, and they should be riveted or bar-tacked top and bottom, or else inserted into the waistline at the top and bar tacked at the bottom.

(Continued next page)

If a special type of work requires special pockets or special tool straps, be sure they are present, and are fastened with bar tacks or rivets. Workers who do much kneeling need special reinforcements at the knees. Those who do heavy work should get the heavier weight denim.

Work pants should be washed frequently. Extremely dirty clothes require such strong washing that the fabric is damaged; besides, the cloth is weakened by embedded soil, grease and perspiration. If the pants are washed at home, it is best to use a strong soap and hot water. Iron them while damp with a fairly hot iron.

Ratings are based on tests of two samples of each brand for tensile strength, weight, thread count, resistance to abrasion and shrinkage. Construction details described above were also considered. Only denim pants were tested. All weights of fabric are listed together according to all-round quality.

From the *Reports*, November 1942.

BEST BUYS

The following brands of the "Acceptable" list were judged to offer the best value for the money.

Pay Day (J. C. Penney Co., Inc., NYC). \$1.59. 10 oz. denim. Bar-tacked at all necessary points. Two rows of stitching at pockets, three rows at seams.

Pow'r House Cat. No.—6174 (Montgomery Ward). \$1.49 plus postage. 8½ oz. denim. Bar-tacked at all necessary points. Two rows of stitching at pockets and seams.

Hercules Cat. No.—17 (Sears-Roebuck). \$1.45 plus postage. 8½ oz. denim. Bar-tacked at all necessary points. Two rows of stitches at pockets, three rows at seams.

ACCEPTABLE

(In order of quality)

Pay Day (See "Best Buys").

Can't Bust 'Em Copper King (Eloesser-Heynemann Co., San Francisco). \$1.98. 10 oz. denim. Riveted or bar-tacked at all necessary points. Two rows of stitching at pockets; two rows on outside and one row on inside seam.

Headlight (Larned Carter and Co., Cincinnati). \$1.98. 8½ oz. denim. Bar-tacked at all necessary points.

ACCEPTABLE—CONT'D

Two rows of stitching at pockets and seams.

Sweet-Orr (Sweet-Orr and Co., Inc., NYC). \$1.98. 8 oz. denim. Bar-tacked at all necessary points. Two rows of stitching at pockets and seams.

Powr House Cat. No.—6174 (Montgomery Ward). (See "Best Buys").

Auto-Brand (Louis Meier and Co., Indianapolis). \$1.95. 8 oz. denim. Bar-tacked at all necessary points. Two rows of stitching at pockets, three rows at seams.

Oshkosh B'Gosh (Oshkosh B'Gosh Co., Oshkosh, Wis.). \$1.89. 8½ oz. denim. Bar-tacked at all necessary points. Two rows of stitching at pockets, three rows at seams.

Hercules Cat. No.—17 (Sears-Roebuck). (See "Best Buys").

Liberty (Liberty Overall Co., Birmingham). \$1.98. 7½ oz. denim. Bar-tacked at all necessary points. Dressy type. One row of stitching at pockets and seams.

Lee (H. D. Lee Mercantile Co., Kansas City). \$1.98. 8 oz. denim. Bar-tacked at all necessary points. Two rows of stitching at pockets, three rows at seams.

Wear Well (Anthracite Overall Mfg. Co., Scranton). \$1.98. 8 oz. denim. Bar-tacked at all necessary points. Two rows of stitching at pockets, three rows at seams.

Red Bar (W. M. Finck and Co., Detroit). \$1.59. 8 oz. denim. Bar-tacked at all necessary points. Two rows of stitching at pockets and seams.

Hard Rock (The Fair Store, Chicago). \$1.59. 8 oz. denim. Bar-tacked at all necessary points. Two rows of stitching at pockets, three rows at seams.

Iron Ace (The Fair Store). \$1.39. 8 oz. denim. Riveted at all necessary points. Two rows of stitching at pockets, three rows at seams.

Iron Thread (Hale Bros., San Francisco). \$1.98. 7½ oz. denim. Bar-tacked at all necessary points except at the top of the side pockets. Dressy type. One row of stitching at pockets and seams.

Casey Jones (Casey Jones, Inc., Baltimore). \$1.85. 7½ oz. denim. Riveted at all necessary points. Two rows of stitching at pockets, three rows at seams.

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NOT ACCEPTABLE

The following work pants were considered to be "Not Acceptable" because of excessive shrinkage without allowance in fit to compensate for losses in size.

Levi's (Levi Strauss and Co.). \$2.25. 10 oz. denim. Riveted at all necessary points. Two rows of stitching at pockets; two rows at outside and one row at inside seam. These pants are pegged at bottom to allow insertion into boots. Would be near top of "Acceptable" list except for excessive shrinkage in length and width.

Carhartt (Carhartt-Hamilton Overall Co.). \$1.98. 7½ oz. denim. Bar-tacked at all necessary points. Two rows of stitching at pockets and seams. Excessive shrinkage in length.

WORK SHIRTS

CU's tests indicate that chambray work shirts (about 60% of all work shirts sold) have generally higher tensile strength, higher thread count and better resistance to abrasion than covert, the other leading fabric.

Buttons (preferably four-hole) should be well secured and button holes should be bar-tacked to prevent raveling. There should be at least five buttons and button holes, evenly spaced, along the front of the shirt, and the panel holding the buttons should be of double fabric. Two buttons at the collar make for additional comfort.

Sleeves should be set into the shirt evenly. The placket at the wrist of a long sleeve should be large enough for the cuff to be laid out flat without straining. The sleeve seam should be bar-tacked at the top of the placket, or a continuous piece of material should be inserted on the inside, to prevent tearing.

A WPB order has limited stitching on work shirts to two rows and eliminated flaps over the pockets.

Frequent laundering, before they're very dirty, will cut down laundry wear on work shirts.

In rating, the following factors were considered: label claims, size, shrinkage, buttons and button holes, presence or absence of reinforcements and ventilators and number of stitches per inch; weight of material, its thread count, tensile strength and resistance to abrasion; fit before and after washing.

None of the shirts tested conformed to fit and shrink-

age requirements of Federal Specifications for "Shirts Other Than Work Shirts." Even with modified and relaxed specifications, 48 of the 86 shirts tested (including 12 marked "sanforized") shrank beyond any reasonable limit.

From the *Reports*, August 1942. (Labor notes included.)

BEST BUYS

The following shirts of the "Acceptable" list were judged to offer the best value for the money.

Double Duty (Hale Bros., San Francisco). \$1.19. High count chambray. Available at Hale Bros. department store.

Ward's Cat. No. 3087 (Montgomery Ward). 74¢ plus postage. High count chambray.

ACCEPTABLE

(In approximate order of quality)

Double Duty (see "Best Buys").

Quality Tested (R. H. Macy, NYC). \$1.79. High count chambray.

Quality Tested (R. H. Macy, NYC). \$1.79. High count covert.

Double Duty (Hale Bros., San Francisco). \$1.19. High count covert.

Oshkosh B'Gosh (Oshkosh B'Gosh, Oshkosh, Wisc.). \$1.39. High count chambray. Available nationally.

Pioneer Cat. No. 3225 (Montgomery Ward). \$1.29 plus postage. High count chambray.

Pay Day (J. C. Penney Stores). \$1.19. High count chambray.

Oshkosh B'Gosh (Oshkosh B'Gosh, Inc.). \$1.39. High count covert. Available nationally.

Iron Ace (The Fair, Chicago). 98¢. High count chambray.

Ward's Cat. No.—3087 (see "Best Buys").

King Bee (W. T. Grant Stores). 98¢. High count covert.

Kay-Do (Kaufman's Department Store, Pittsburgh). \$1.39. Low count covert.

Iron Ace (The Fair, Chicago). 98¢. High count covert.

Super Ox Hide (J. C. Penney Stores). 79¢. High count covert.

Kay-Do (Kaufman's Department Store, Pittsburgh). \$1.39. High count chambray.

Sweet-Orr (Sweet-Orr & Co.). \$1.39. High count covert. Available nationally.

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NOT ACCEPTABLE

The following shirts would be considered "Acceptable" except for excessive skimping or bad fit after washing.

Red Star (R. H. Macy, NYC). \$1.29. High count chambray. Skimped in size.

Red Star (R. H. Macy, NYC). \$1.29. High count covert. Skimped excessively in chest, length and yoke measurements and large in collar.

Par-Val (W. T. Grant Stores). 98¢. Shirt showed variation. One shirt marked sanforized was a high count chambray, skimped excessively in chest, length, yoke and collar. The other was a high count chambray; skimped excessively in chest, length, sleeve, yoke, armhole, and collar.

Sweet-Orr (Sweet-Orr & Co.). \$1.39. Low count chambray. Skimped in chest, length, armhole and collar.

Pay Day (J. C. Penney Stores). \$1.19. High count covert. Skimped excessively in chest, length, and yoke; collar cut extra large.

The Brave-Man (Cohen-Fein Co.). \$1.29. Low count covert. Skimped in chest, length, sleeve, yoke, armhole and collar.

Fair and Square (Frank & Seder). 98¢. Low count chambray. Skimped in chest, length, sleeves, armhole and collar.

Ward's Cat. No.—3088 (Montgomery Ward & Co.). 74¢. High count covert. Skimped excessively in chest, length, yoke, armhole and collar.

The Brave-Man (Cohen-Fein Co.). \$1.29. High count chambray. Skimped in length, sleeve, yoke, and collar.

Melton (Melton Shirt Co.). \$1.39. Low count chambray. Skimped in chest, length, sleeve, yoke, armhole and collar.

Melton (Melton Shirt Co.). \$1.39. Low count covert. Skimped in chest, length, sleeve, yoke, armhole and collar.

Uncle Sam (Arbuthnot-Stephenson Co.). \$1.25. Low count covert. Skimped in chest, length, sleeve, yoke and collar.

Super Ox Hide (J. C. Penney Stores). 79¢. High count chambray. Skimped in chest, length, yoke and collar.

Auto-Brand (Lewis Meier & Co.). 95¢. High count chambray. Material shrank excessively and was skimped in length, sleeve, armhole, and collar.

Lee (H. D. Lee Mercantile Co.). \$1.39. Low count covert. Skimped in chest, length, sleeve, yoke, armhole and collar.

Uncle Sam (Arbuthnot-Stephenson Co.). \$1. High count chambray. Skimped in chest, length, sleeve, yoke and collar.

Big Yank (Reliance Mfg. Co.). \$1. Shirts varied in construction. One was high and one was low count chambray. Both were skimped in chest, length, sleeve, yoke, armhole and collar.

Big Yank (Reliance Mfg. Co.). \$1. High count covert. Skimped in chest, length, sleeve, yoke and collar.

Auto-Brand (Lewis Meier & Co.). \$1.35. High count chambray. Skimped in chest, yoke and armhole. Cut large in collar.

Fair and Square (Frank & Seder). 98¢. Low count covert. Skimped in chest, length, sleeve, yoke, armhole and collar.

Headlight (Crown Overall Mfg. Co.). \$1.40. High count chambray. Skimped in chest, length, sleeve, yoke, armhole and collar.

Headlight (Crown Overall Mfg. Co.). \$1.40. Low count covert. Skimped in chest, length, sleeve, armhole and collar.

LAUNDERING

If you do your own laundering, observe the following rules to save time and effort:

Sort the clothes systematically, on a clean floor or newspaper.

Turn the clothes inside out, and inspect them as you sort. Set aside any that are torn or especially stained.

Mend all garments but hosiery before they are washed (missing buttons may be sewed on afterward, if desired). Try "thermoplastic" mending tissue for patching. Remove stains before soaking (see "Stain Removal" page 340).

Soak clothes in cool or lukewarm water to loosen dirt, save time, and lessen wear and tear of laundering, but remember that only white or fastcolor cottons and linens can be safely soaked. With a small brush, rub soap into badly soiled spots while they are being soaked. Fifteen minutes' soaking is generally enough, though longer soaking does no harm.

(Continued next page)

Washing: If you have a machine, follow closely the instructions given by the manufacturer. Don't overload the machine, and don't use more soap than necessary. An inch of standing suds is adequate.

Rinsing should be thorough, since soap left in fabrics tends to yellow and weaken them. Use warm water for rinsing, with at least two changes of water.

Bleaching is safe only for cottons and linens, and then the best method is to hang the clothes in the sun. If commercial bleach is used, follow directions carefully, and see that it has been stirred thoroughly into the rinse water before the clothes are put into it. Never use bleaches on silks, synthetics, woolens or colors.

Starching, properly done, helps keep garments clean and makes washing easier, as well as adding stiffness and gloss.

Wringing can be hard on clothes if not done carefully. Washing machine wringers or hand-operated roller-type wringers are best for clothes and much easier to use than is hand wringing. If you must wring by hand, never twist water out of silks, woolens, synthetics or fine fabrics.

Drying properly can make ironing easier, if you shake out the wrinkles and straighten clothes first. Hang garments by their heaviest portions, with enough of the garment over the line to keep it from being pulled out of shape.

Ironing clothes while they are still damp is easier and often more satisfactory than allowing the clothes to dry completely, then sprinkling. See that your ironing board is adjusted to the right height for you, and that it is well padded.

● COMMERCIAL LAUNDRIES

Most large laundries offer several different types of service, the degree of finishing varying with the price. Balance the cost against the amount of time it takes to do the ironing if you use one of the cheaper services.

In some communities, it pays to divide your laundry bundle, sending part to a commercial pound-charge laundry, and having the rest done by the piece. Check weights of different pieces and their cost when laundered by the pound and by the piece.

From the *Reports*, March and September, 1943.

Medical, Drug Supplies

The shortage of physicians, nurses and hospital facilities grew more alarming in 1943 and will probably continue to get worse in the absence of a national wartime health plan. Serious problems will confront the country if it runs into a major epidemic.

The drug situation improved in the second half of 1943 and adequate supplies of major drugs for civilians will be available in 1944. Larger glycerine supplies have improved the drug picture, and important drugs like atabrine and other quinine substitutes and the sulfa compounds will be on hand for civilian use.

Nothing has been done to reduce the price of vitamin preparations, although the price paid by manufacturers for raw materials has fallen about 75% in the past five years. Similarly, the price of many drugs has not been reduced despite wartime economies in packaging and materials.

ALKALIZERS

Habitual dosing with "alkalizers" can cause alkalosis, a serious condition that is particularly likely to occur in elderly persons or those with kidney disease.

However, there is no danger in the use of an alkalizer for an occasional attack of "heart burn" or "gas" due to alcohol, sensitivity to a particular food, hurried eating or emotional distress. Ordinary baking soda (bicarbonate of soda) will work as well as any of the proprietary remedies such as *Bisodol* though the latter has the advantage of a more pleasant taste. Baking soda in seltzer water is cheaper and safer than effervescent drinks such as *Bromo-Seltzer* since the latter contains also the dangerous drug acetanilid (see page 203).

The Reports for October and November 1938 contained detailed articles on alkalizers and their uses and effects.

ANTISEPTICS

The ideal antiseptic is one which will kill bacteria or inhibit their growth and activity without injuring the human tissues to which it is applied. Unfortunately, every known antiseptic can harm tissue cells and blood. The tissues themselves destroy germs; but when an antiseptic is applied it may interfere with the natural protective action of the tissues.

(Continued next page)

Irrigation or douching of the eyes, nose, throat or genital tract with commercial antiseptic solutions reduces the resistance of these areas to infection. The secretions and the natural defense capacities of these tissues are adequate for combating germs under normal conditions. In abnormal cases, medical care and not an antiseptic is required.

Pouring an antiseptic into a wound or cut is no guarantee of antisepsis; it is possible that it will be harmful.

Doctors often treat large open wounds by irrigating with sterile normal¹ salt solution. Rarely is an antiseptic poured into the depth of a wound itself. The same mechanical cleansing of a wound can be achieved in first aid by allowing a little blood to run from the wound or by immersing the cut part in running cold water.

Unlike the wound itself, the intact skin in the borders of the wound will not be harmed by an antiseptic, and since there are always germs on the skin, it is advisable to apply an antiseptic at the margin and around the wound, but not directly in the wound. It is difficult to avoid introducing antiseptic directly into small cuts, but the less the better.

The best all-around antiseptic for home or first aid use is mild (2%) tincture of iodine. It will destroy the disease-producing germs on the skin bordering a wound, or stop their growth, and will not cause the burn that ordinary tincture of iodine (7%) often produces. If not poured into a wound (*and it never should be*), mild tincture of iodine will not smart and therefore can be used for children.

Before iodine is applied, grease or dirt on the skin adjacent to the wound should be washed off with benzine. If this is not available, soap and water may be used. So-called "germicidal" soaps are not appreciably more germ-destroying than ordinary toilet soap.

Other relatively safe and effective antiseptics on the market are the mercury antiseptics: the Merphenyl compounds (*Merphenyl Borate or Nitrate*), *Metaphen*, *Mercresin* and *Merthiolate* either in tincture or watery solution.

Mercurochrome, another mercury preparation, is not a good antiseptic. If you have *Mercurochrome* in your first aid kit or medicine chest, replace it with mild tincture of iodine or one of the other mercury solutions. Don't depend

¹ Same concentration of salt as in the blood.

on *Hexylresorcinol*, *Absorbine, Jr.*, *Pepsodent Antiseptic* or *Listerine* either — all have negligible antiseptic properties.

The chlorine antiseptics, *Zonite*, *Hychlorite*, etc. are not suitable for first aid. Because of their caustic properties, they should be used only under direction of a physician. Likewise, antiseptic dyes—acriflavine, gentian violet, brilliant green, scarlet red, carbol fuchsin and bismuth violet—are useful and safe only in the hands of a physician.

Hydrogen peroxide is a weak antiseptic used chiefly to clear away blood stains or clots or foreign materials, and is of little value in first aid.

Unguentine is representative of the so-called antiseptic salves. While they may do no harm on small superficial burns, they have no place in first aid treatment of cuts and wounds, because they are not adequate antiseptics.

The so-called colloidal silver antiseptics — *Argyrol*, *Protargol*, *Neo Silvol*, *Collargol* and other silver salts — are frequently used in the treatment of sore throats, tonsillitis and the common cold. Medical opinion tends to believe that they will not relieve or cure any of these conditions, but used inexpertly, they can aggravate the infection. They can also lead to a condition known as "argyria" — a permanent bluish discoloration of the skin and mucous membranes—when used over a period of time.

Antiseptics have no value when applied to acute infections of the skin and subcutaneous tissues, such as pimples, boils and abscesses. Painting a pimple with tincture of iodine will not bring it to a head or "sterilize" the pus. Nor are wet applications of *Absorbine, Jr.*, *Hexylresorcinol* or *Listerine* of any value. Wet applications of *Lysol*, on the other hand, can be definitely injurious; burns of the skin have occurred from such applications. Salves such as *Ichthylol* are useless for treatment of pimples and boils.

The best way to treat a pimple or a boil at home is by application of hot wet compresses. Boric acid, epsom salt or bicarbonate of soda may be added to the water in suitable proportions (to one glass of hot water add one teaspoonful of boric acid, or one tablespoonful of epsom salts or soda) if desired, but heat and moisture are the important things. Soft, clean, closely meshed cotton or linen material (not gauze or absorbent cotton), folded to make several layers, is best for hot wet compresses. A heat lamp or hot water bottle may be used to keep the dressings hot.

Antiseptic solutions are of value in the treatment of burns, sunburn and oozing, itching infections of the skin such as poison ivy or "weeping" eczema. The best antiseptics for these disorders are not the commercial proprietary remedies but ordinary bland household antiseptics. Cold, wet compresses dipped in boric acid solution (one teaspoonful to a glass of tap water which has been boiled and then cooled) or Burow's solution (one tablespoonful to a glass) will do much to relieve burning, soreness and itching.

The compresses, made of the same materials used for hot dressings, should be kept on, cold and soaking wet, for several hours if possible. Infections or burns near the eyes should be treated only with boric acid solution.

CU has long pointed out that the claims of highly advertised antiseptics or mouthwashes are often in inverse proportion to their antiseptic properties, that antiseptic mouthwashes are unnecessary for normal hygiene of the mouth (see page 190).

Recent investigations of the U. S. Food and Drug Administration not only confirm this advice but add a new reason for avoiding mouthwashes; namely, that they may do more harm than good and that, far from discouraging bacterial growth, they may actually favor growth by injuring the normal tissue defenses.

The F&DA tested 87 brands of commercial mouthwashes for toxicity to tissue and for germicidal action on the *Staphylococcus aureus* organism (common germ in wound infections). All were found to be harmful to tissue, and only nine were found to be germicidal under the test conditions.

The following were among the brands tested which were not germicidal at a test dilution of 1 part of antiseptic to 2½ parts of water, but were harmful to tissue at an even weaker strength (1 to 5 or 1 to 10):

Aseptisol	Mifflin
Borolene	Pepsodent
Calox	Purepac
Forhan's	Sanalin
Hospital	Squibb
Iodo-septic	S. T. 37
La Crosse	United Whelan
Listerine	Vicks'
MI-31	White Cross

The following brands, although germicidal in one dilution or another (1 to 2½ through 1 to 10) were in each case harmful to tissue in an even weaker solution:

Afko	Hychlorite
Astring-O-Sol	Jermene
Extol	Mark 4
Fo-Fen-X	Pentacresol
Zonite	

The use of "sulfa" drugs in the treatment of acute infections has gained wide support in medical practice; doctors often use "sulfa" powder on large, open wounds. The possibility of serious harm from the indiscriminate use of "sulfa" preparations, however, must not be overlooked. The use of "sulfa" drugs on the skin, on wounds, pimples, boils or "eczema" may cause severe reactions in some persons. Even adhesive bandages (*Band-Aids*, for example) impregnated with "sulfa" drugs may cause such reactions.

The instillation or spraying of "sulfa" solutions into the nose or throat, in the treatment of colds, sinusitis, sore throat, etc., should be avoided until there is definite proof that they are of value. Until such proof is produced, the risk would seem more than to offset any possible gain.

ASPIRIN

Aspirin should be purchased by price, rather than by brand. Though brands sell at widely different prices, all products labeled "Aspirin Tablets" must meet the standards set up in the National Formulary. Some are called N.F. (National Formulary) Aspirin Tablets; some say just Aspirin Tablets and some say Aspirin, U.S.P.

Makers of *Bayer's* aspirin have advertised that their brand disintegrates more quickly than other brands, and have claimed that this makes the aspirin more effective. Aside from the fact that tests have shown that some other brands disintegrate as fast or faster than *Bayer's* speed of disintegration has nothing to do with the effectiveness of aspirin. The drug has to pass into the intestines before it can be absorbed in any appreciable quantity, and even the toughest of aspirins is dissolved in the time it takes to pass through the stomach.

Aspirin consists of acetyl-salicylic acid, a pain killer. Though probably the safest of commercial pain-relief remedies, aspirin is not entirely harmless. Some indi-

viduals are sensitive to it and can develop unpleasant symptoms—nausea, skin eruptions, swelling of lips and face, and palpitations—from taking even small doses. If such symptoms do occur, the user should, of course, stop taking aspirin at once. And persons suffering from asthma, hay fever, hives or eczema should take aspirin only under a physician's supervision.

Aspirin has no curative effect on colds or other organic ailments, but may provide temporary relief from pains, soreness, etc., accompanying such conditions.

Aspirin may become somewhat less plentiful, because it is needed in large quantities by the government, and because several of the materials used for its preparation are required for war production. Salicylic acid is used for chrome and khaki dyes and for vulcanizing natural rubber. Phenol, from which it is made, is important for production of explosives and plastics.

From the *Reports*, January 1941.

BURNS

Medical opinion as to the best methods of treating burns has undergone a sharp change in the past year or so. Experience in the front lines and in the treatment of industrial accidents has convinced doctors of the hazards in the use of tannic acid, and has changed their attitude toward the treatment of both severe and superficial burns.

In severe burns, the prevention of the depressed state known as "shock" is of first importance. If a physician is available, he can both combat shock and relieve pain by the administration of morphine. Contrary to previous medical belief, it is now considered neither necessary nor desirable to cover the patient with heavy blankets or to use hot water bottles. Unless the patient is exposed to low temperatures, he should be covered only with a sheet or a thin blanket, and kept in a position with the head slightly lower than the rest of the body until he reaches a hospital.

Whenever possible, treatment of severe or extensive burns should start with the administration of one-half grain of morphine sulphate by injection or by mouth to relieve the pain. If the patient can be gotten to a hospital within two hours, no ointments or salves of any kind should be used. Sterile, dry gauze should, however, be applied to exposed surfaces to help prevent infection.

If the patient cannot be taken to a hospital within two hours, the burn should be covered with sterile boric acid ointment or with petroleum jelly (such as *Vaseline* over which one or two layers of sterile gauze should be smoothly applied. (Tubes of ointment are less easily contaminated than jars.) Over the first gauze dressing, there should be placed a pad of sterile gauze or sterile cotton, and the entire dressing should be held in place with a firm but not tight bandage. This dressing should not be disturbed except by a physician. If necessary, it can be left in place for as long as two weeks.

Minor burns: The following treatment is recommended for minor burns:

1. Wash the area with white soap and cold water.
2. Do not break blisters.
3. Cover the burn with clean or sterile vaseline, or 5% boric acid ointment, and then apply a fine-meshed gauze over the ointment.
4. Apply a wad of gauze or cotton over this, sufficiently large to keep dirt away but not so large as to make it impossible for the burned person to resume work.
5. If the burn is on the face or near the eyes or the genitals, consult a physician at once.

The use of proprietary ointments such as *Unguentine* or *Bio-Dyne* is not recommended for either serious or minor burns. They are certainly no better than plain boric acid ointment or vaseline, and there is some evidence that they may not be as good. Careful studies show also that the use of sulfonamide drugs such as sulfadiazine and sulfathiazole in burn ointments does not help prevent infection.

From the *Reports*, August 1943.

COLDS

The common cold is generally considered to be caused by an "ultramicroscopic virus"; no effective means of prevention or cure is yet available. All "cold remedies" must be appraised in the light of this fact.

"Cold vaccines" are suspensions of the dead bacteria usually associated with the discharge in a cold. By injecting them, physicians seem to have reduced the severity and duration of colds effectively in a small percentage of cases. Cold vaccines taken by mouth, such as *Entoral*, have not been found to be of any value.

(Continued next page)

A cold is a potentially serious ailment, capable of causing many complications. It should not, therefore, be neglected, but rather treated by rest in bed for a day or so. If rest in bed is necessary for the average person, it is imperative for all children, for all adults suffering from a chronic ailment such as diabetes, rheumatism, etc., and for every one who has fever accompanying the cold.

Advertised cold remedies can at best only relieve local discomfort. Most remedies are worthless, some are injurious, and a few are actually dangerous.

Pills—Aspirin is of value only in diminishing the aches and pains that sometimes accompany colds. Although aspirin causes reactions in some people, it is safer to use than other analgesics (pain relievers). *Grove's Laxative Bromo Quinine* contains acetanilid—a drug which can produce serious reactions if used indiscriminately (see page 202).

The most helpful drugs for relief of congestion and discharge from the nose are codeine or codeine and papaverine. But these can be prescribed only by a physician.

Nose Drops—There is serious hazard in habitual use of nose drops. Those containing mineral oil—and many widely sold brands do—have been found responsible for many cases of serious disability or death, due to "lipid pneumonia." When oily drops are sprayed or dropped into the nose, they may pass through the glottis and be breathed or gravitate into the lung spaces, where they accumulate and act as irritants. Lipid pneumonia can occur in normal adults as well as in enfeebled children and infants. Many instances of "chronic bronchitis" or "bronchiectasis" are really cases of lipid pneumonia resulting from irritation or infection of the lungs by mineral oil. (See the *Reports*, January 1942)

No nose-drop preparations, whether of mineral or vegetable oil, will prevent a cold or shorten its duration. In fact, the indiscriminate use of any nasal preparation—oil, watery solution or jelly—favors the spread of infection to the sinuses, ears and bronchi (see the *Reports*, February 1940).

If you must use nose drops, neo-synephrin $\frac{1}{4}\%$ in watery solution, or ephedrine 1% in watery solution are among the safer preparations for relief of nasal congestion. Two or three drops every three or four hours are sufficient. The effect is brief and may be followed by increased congestion. Avoid jellies.

Silver preparations such as *Argyrol* or *Neo Silvol* do not relieve colds. They are frequently destructive to tissue and may cause "argyria" (a permanent blue discoloration).

Inhalants—Benzedrine is the most recently developed of the inhalant drugs. While some people may find it effective in shrinking the mucous membrane of the nose, it can cause sleeplessness and other toxic symptoms unless the directions on the tube are scrupulously followed.

Ointments—Neither *Vicks' Vaporub* nor any other ointment applied to the skin can prevent or cure colds. Such ointments cannot "penetrate skin." They may diminish chest soreness.

Alkalizers—Alkalizers have no influence whatever on the course of a cold.

Vitamins—For persons on adequate diets, vitamin preparations will not help in prevention or treatment of colds.

Laxatives—Laxatives have no value either at the onset or during a cold.

CONSTIPATION

A bowel movement every day is not essential to good health. Many people in perfect health have an evacuation no oftener than once every two or three days without the slightest ill effects.

True constipation actually exists when evacuation is difficult, incomplete or painful. A rational treatment can be prescribed only after careful examination has determined whether the condition is organic or functional. Constipation caused by ulcers, inflammation, tumors or other organic diseases can be relieved only by curing the underlying disorder. Medical investigation is particularly important for those adults who, after having had regular and satisfactory evacuations, begin to experience a persistent change in the character or frequency of bowel movement. Most cases of habitual constipation, however, are due to functional factors such as living habits, emotional tension or improper diet.

Laxatives for the relief of chronic constipation should be used only as a crutch until good habits replace bad ones.

When the stools are hard and small, and straining is necessary, a "lubricating" mineral oil may be helpful. Not more than one to two tablespoonfuls need be taken, and only at night before retiring. If mineral oil is taken in this way, there will be a minimum of interference with

digestion and absorption of food and vitamins and a minimum of rectal trouble.

Agar-agar, psyllium seed and its derivatives, and the tragacanth gums fall into the class of bulk-producing laxatives. Of these, the tragacanth products are most effective, and psyllium seed preparations the most harmful. Although the gummy laxatives are an advance over the old familiar cathartics, like other laxatives they have many drawbacks. Indigestion, rectal trouble and rarely, obstruction of the digestive tract may occur from their use. Elderly people and persons with disease anywhere along the digestive tract should avoid all bulk producers.

Cascara sagrada may occasionally be used to advantage, especially for elderly persons. After a few weeks the dose should be reduced to the smallest amount necessary for a satisfactory evacuation. Then gradually lengthen the interval between doses until none is needed.

Enemas, like laxatives, should be used only as transitory aids in the re-establishment of good function. The least irritating solution is warm salt water—one teaspoonful of salt to a pint of water.

Children should rarely be given laxatives or cathartics. Chronic constipation in children is usually a personality problem and may require the services of a competent physician or child psychiatrist. When there is abdominal pain in child or adult, laxatives and enemas must be avoided, since the pain may be a symptom of acute appendicitis. Taking a laxative may cause rupture of the appendix and possibly death.

Habitual use of laxatives, "roughage foods" and excess mineral oil is frequently responsible for hemorrhoids. Temporary constipation in children requires no treatment. In adults occasional constipation will do no harm. If an evacuation is desired, however, the most rational procedure is to take an enema, since it is in the last foot or so of the bowel that stoppage generally occurs. If a mild laxative is desired, it may be chosen from the "Acceptable" list below.

Chronic or habitual constipation must be treated from the point of view of the patient's mode of life, his habits, occupation and his personality.

Diet, exercise, personal hygiene, drugs and bulk producers all can have a useful place in treatment. But because of the variety of factors influencing cause and

treatment, each case must be considered individually.

There is no doubt that drugs are necessary in the early treatment of many cases—at least until diet and proper habits have established a satisfactory rhythm of movement. And when social and psychological tensions cannot be successfully removed, it may be necessary to use a drug indefinitely. For elderly persons drugs are particularly useful because it is too difficult to establish new habits or modes of living. But in all cases drugs are two-edged weapons capable of doing harm as well as good.

ACCEPTABLE

(Doses are for adults)

For temporary constipation:

Milk of Magnesia, U.S.P. 1 to 2 tablespoonfuls.

Aromatic Fluid Extract of Cascara Sagrada, U.S.P. 1 to 2 teaspoonfuls.

Seidlitz Powders, U.S.P. 1 or 2 pairs of powders.

Effervescent Sodium Phosphate, U.S.P. 1 tablespoonful.

Compound Licorice Powder, 1 to 3 teaspoonfuls.

For habitual constipation:

Heavy Liquid Petrolatum (mineral oil), U.S.P. 1 to 2 tablespoonfuls.

Emulsion of Liquid Petrolatum, U.S.P. 2 to 3 tablespoonfuls.

Haley's M-O. A mixture of mineral oil and milk of magnesia.

NOT ACCEPTABLE

- **BULK-PRODUCING TYPE**

Edro-lax	Psyllium Seed
Hood-lax	Saraka
Inner-Clean ¹	Serutan
Kiomin	Swiss-Kriss

- **SALINE CATHARTIC TYPE**

Adler-i-ka ¹	Health Crystals	Pluto Water
Crazy Crystals	Jad Salts	Sal Hepatica
Eno Salts	Kruschen Salts	Sleepy Brand Salts
Fruitola	Occy-Crystine	Texas Mineral Crystals

- **CASCARA SAGRADA TYPE**

Boals-Rolls ¹	Nature's Remedy (NR) ¹
	Petrolagar with Cascara

¹ These preparations are listed under more than one heading, because they contain several active ingredients.

(Continued next page)

• ALOE TYPE

Because of irritant effects:

Adler-i-ka¹
Alophen
Carter's Little Liver Pills
Dr. Edwards Olive Tablets

Grove's Laxative
Bromo Quinine
Lapactic Pills
Nature's Remedy (NR)¹

• SENNA TYPE

Because of irritant effects:

Boals-Rolls¹
Caldwell's Syrup Pepsin
Castoria

Herb Teas
Inner-Clean¹

• PHENOLPHTHALEIN TYPE

Because it is an irritant and frequently responsible for marked stomach and intestinal disturbances and because it may be responsible, in sensitive people, for ulcers of the mouth and skin eruptions:

Agarol	Feen-a-Mint	Petrolagar with Phenolphthalein
Asper Lax	Hints	Phenolax
Boals-Rolls ¹	Hylax	Prunoids
Cascarets	Noral-Agar	Regis
Dilaxin	Nutlax	Veracolate
Ex-Lax	Phenobilin	

DIET, VITAMINS AND MINERALS

Authorities do not yet agree about the necessary requirements for the various vitamins and minerals at different age levels. The following list, adapted from tables of the Committee on Food and Nutrition of the National Research Council, gives an approximation of daily optimum requirements for the normal adult. During pregnancy and lactation requirements may be 50% to 100% higher.

Infants require a vitamin D supplement of 400 to 800 U.S.P. units daily. Vitamin D is also necessary for older children and adults, but it is stored in the body and Summer sunshine usually provides enough for ordinary requirements. Persons who for any reason do not get ordinary exposure to Summer sunshine will need vitamin D supplements up to the amount recommended for infants.

¹ These preparations are listed under more than one heading, because they contain several active ingredients.

DAILY NEEDS OF THE NORMAL ADULT

Vitamin A—5000 International or U.S.P. Units.
Thiamine (vitamin B₁)—600 International Units or 1.8 milligrams.
Riboflavin (vitamin B₂)—2700 micrograms or 2.7 milligrams.
Niacin (nicotinic acid)—18 milligrams.
Ascorbic Acid (vitamin C) — 1500 International Units or 75 milligrams.
Vitamin D—(see above).
Calcium—0.8 gram.
Iron—12 milligrams.

• CALORIES, PROTEINS AND FATS

The number of calories a person needs each day depends largely upon the amount of energy used in work and play. Planning of wholesome meals does not generally require consideration of calorie or energy needs, since the energy needs will be met automatically if there is sufficient food to satisfy appetite. The best energy foods are those that supply vitamins and minerals as well as calories. Refined food such as sugar, and refined breakfast cereals are good sources of energy, but they do not possess the valuable vitamins and minerals contained in unrefined, natural foods.

The normal adult requires about 2½ ounces of protein a day. Protein is important chiefly as a source of amino acids; in order to obtain a sufficient amount of all the essential amino acids, it is necessary to obtain protein from a wide variety of sources—milk products, vegetables and animal tissues (meat, fish or fowl).

Although fats are mainly a source of energy, they also have importance as sources of necessary fatty acids and as carriers of the fat soluble vitamins A, E and K. The milk fats are good sources of vitamin A. Vegetable fats, fortified oleomargarine are just as good as butter.

• VITAMINS

Vitamin preparations have an important place in medical treatment of dietary deficiencies. Severe deficiency disorders such as pellagra and beri-beri are treated with large doses of the pure synthetic vitamins plus a well-balanced diet. Mild deficiency disorders due to poor food habits, infections or impaired function of the digestive tract are often relieved simply by a wholesome, well-bal-

anced diet containing milk, milk products, eggs, fruit, vegetables, meats, fish and whole-grain wheat products.

These foods contain all the known vitamins and minerals that a normal person needs. In addition, they probably contain vitamin factors that have not yet been discovered or isolated. In some mild deficiency disorders, however, a physician often supplements the diet with a vitamin preparation.

The choice of a suitable vitamin supplement is difficult not only for the consumer but also for the physician. There are hundreds of products on the market, with new ones appearing every month, and only those sold in interstate commerce are subject to check by the U. S. Food & Drug Administration. Some general rules regarding vitamin products are offered to help the consumer make a wise choice.

Vitamins are roughly classified as fat-soluble and water-soluble. The former include vitamins A, D, E and K, the latter all the B vitamins and vitamin C. The B complex consists of at least a dozen known factors.

In overcoming a mild vitamin deficiency (serious deficiencies can be treated effectively only by a physician), it is important to know whether the deficiency is mainly of the fat-soluble or the water-soluble vitamins. If the fat-soluble vitamins are lacking, a fish liver oil preparation (cod, halibut, percomorph, etc.) will overcome the deficiency. If the deficiency is of the B vitamins, a vitamin B complex preparation should be used. If the deficiency is in vitamin C, fresh or canned fruit juice or synthetic ascorbic acid will be helpful. These are, of course, measures which should be resorted to only if it is you can't get all necessary vitamins from the diet.

If vitamin D alone is desired, the best buy is viosterol in oil. For vitamin A alone, a halibut liver oil product is a better buy than synthetic vitamin A or carotene products.

Cod liver oil with or without viosterol fortification used to be the best buy for vitamins A and D together. Because of the war, however, imports have sharply dwindled, and the price of cod liver oil has risen accordingly. Other fish liver oils such as halibut liver oil or "Haliver" oil, and "Oleum Percomorphum" with or without added vitamin D are also excellent sources of both vitamins A and D.

In buying a vitamin A and D product the consumer

should note the number of U.S.P. or international units of vitamin A and vitamin D per gram of the product, and then compare the cost of different products in terms of their A and D potency.

Fish liver oils such as cod, halibut and percomorph are prepared for teaspoon and drop dosage. Infants can take the preparations without difficulty, but children and adults may find them too unpalatable. For them the convenient, though more expensive, forms are the concentrates of these oils in capsules or tablets.

See the *Reports*, September 1943, for more detailed discussion and brand name ratings of vitamin A and D preparations.

The B vitamins are frequently inadequately supplied by the American diet. The only effective preventive of vitamin B deficiency is to eat natural (unprocessed) foods — whole grain bread and cereals; to eat more eggs, fish, milk and to adopt methods of cooking which will conserve the B vitamin (as well as mineral and other vitamin) content of foods.

Physicians use the pure synthetic B vitamins for the treatment of severe specific deficiency disorders such as beriberi, pellagra, and ariboflavinosis. For mild and moderately severe cases of vitamin B deficiency, however, the best sources of the B vitamins are dried brewers' yeast powder or tablets and liver extract. These have an advantage over synthetic vitamin preparations in that they contain the B vitamins in the balanced state characteristic of natural foodstuffs. Furthermore, they contain other factors of the B complex which have not yet been isolated or synthesized, but are probably essential.

To be effective, yeast must unfortunately be taken in large amounts (20 to 30 tablets or 7 to 10 grams of powder daily), and some persons are not able to tolerate these amounts. A few persons cannot tolerate any amount of yeast.

Wheat germ and wheat germ cereals must be considered a food and not a B complex concentrate, since the germ contains about 30% protein and 12% fat, and relatively small amounts of B vitamins.

Crude liver extract is a good source of the anti-pernicious anemia factor as well as the B vitamins. It must be given by injection into the muscle.

Many food stores specialize in so-called "health foods."

(Continued next page)

These are supposed to be mineralized and vitaminized foods and to have special nutritional virtues. Many of them are simply extracts of sea-weed containing considerable quantities of iodine but not much of anything else.

Other "health foods" consist of wheat products, cereals and dried extracts of fruits and vegetables. None can replace a wholesome, balanced diet.

• MINERALS IN THE DIET AND IN MEDICINES

Although the average American diet contains most of the essential minerals, many diets are too low in calcium. At all ages, from the premature infant to the elderly adult, a daily intake of calcium-rich food is necessary for good health.

Intake of a quart of milk daily will supply the calcium required by small children and pregnant and nursing mothers; others need at least one pint of milk every day (see table page 179 for standards set by National Research Council). While calcium is present in vegetables and fruits, these foods cannot supply a sufficient amount in a form readily utilized by the body. If whole milk cannot be tolerated for some reason, its calcium content can be furnished in the form of buttermilk and skim milk, or partly in creamed soups, creamed vegetables, custard, ice cream, *Junket* and puddings. About three or four ounces of cheese is equivalent in mineral content to one pint of milk.

Phosphorus is present in abundance in meat and grain products. Rarely is there a deficiency in this mineral. It exists in ideal combination with calcium only in milk or milk products. Medicinal preparations containing calcium and phosphorus in varying proportions cannot take the place of milk products at any age. Only for specific or serious disorders such as tetany and bone and skin disorders do physicians prescribe or use calcium or calcium-phosphorus preparations. Dental decay will not be prevented or cured by use of such mineral preparations with or without added vitamin D.

While calcium is abundantly present in milk, there is no evidence that drinking milk in any amount will relieve "jitters" or is vital to "youthful spirits," as milk companies advertise. Nerve and emotional balance depend upon many other factors besides vitamins and minerals.

A lack of sufficient iron in the body results in "iron

deficiency" or "secondary anemia." The most common cause of an iron-deficiency anemia in adult life in either sex is hemorrhage—especially that which occurs repeatedly as in persons with ulcers and hemorrhoids, and in women with excessive menstrual bleeding. Anemia may also occur during pregnancy.

In the treatment of iron-deficiency anemia, a well-balanced diet is the first essential. Because no one food contains an abundance of iron, variety should be emphasized. Grain products lose more than 50% of their iron content in the refining process. Therefore, foods should also be as close to their natural state as possible.

Listlessness, fatigue, pallor and lack of pep may be due to anemia, but they may arise also from a variety of other serious diseases of the lungs, heart or other organs. Only a complete physical examination and a hemoglobin determination can show whether such symptoms are due to iron deficiency. When iron-deficiency anemia is recognized, it can be treated with adequate amounts of simple iron preparations such as ferrous sulphate.

Many iron tonics that are advertised to the public are remarkable more for the amount of alcohol they contain than for their utilizable iron. The "tonic" effects of such preparations are chiefly due to the alcohol. Tonics containing copper, liver extract, manganese, vitamin B₁, the whole B complex or yeast are of no special value in the treatment of ordinary secondary anemia.

EYES

Healthy eyes do not need to be washed regularly. If an eye-wash is desired, a solution of boric acid (1 teaspoonful dissolved in a glass of boiling water and allowed to cool) is as satisfactory as any of the high-priced eye-washes sold in drug-stores. An eye cup may be used; but be sure to sterilize it in boiling water first.

You can treat a sty at home by applying to the eye a small cloth or thick gauze wrung out in hot boric acid solution (1 teaspoon to a glass of boiled water). If the collection of pus does not spontaneously discharge itself, medical aid should be sought. Recurring sties require the attention of a physician.

"FEMININE HYGIENE"

No commercial preparations—liquids, powders, foams, tablets, suppositories or jellies—can by themselves be relied

upon for the "feminine hygiene" for which they are advertised. Many of them, such as *Lysol* and *Zonite*, are injurious; the former is known to have caused several deaths.

There are, furthermore, no medical preparations which in themselves have any value in the treatment of leucorrhea (a white vaginal discharge). Leucorrhea is not a disease, but a symptom, the cause of which must be known before effective treatment can be prescribed.

The douche preparations advertised for their "cleansing" value should certainly not be bought. Regular washing of the vaginal canal is not only unnecessary, but may be harmful. A douche should be employed only when advised by a physician for the treatment of a specific condition.

"Daintiness" depends on sufficiently frequent bathing and clean clothing, not on douching.

FIRST AID KITS

From the point of view of price as well as quality, the best way to get a good first aid kit is to assemble it yourself. One trip each to a drug store and a 5-&-10¢ store should suffice to obtain the ingredients. The cost of a general emergency kit for home or camp should be about \$4 to \$5 including container. Metal is sturdy, but in its absence, fibre or heavy cloth is quite satisfactory. A smaller kit for hiking or for the automobile should cost from \$1 to \$1.50. The ingredients listed below are considered essential (none of the commercial kits examined by CU contained all these ingredients):

First aid instruction book (American Red Cross)

Triangular bandages (two are essential, more desirable),

1-inch adhesive compresses (such as *Band-Aid*)

Assorted sterile bandage compresses

Sterile gauze pads (about 3 inches square)

Sterile gauze pad (about 1 yard square)

Burn ointment (such as sterile boric acid or vaseline ointment)¹

Iodine, mild tincture (2%)

Aromatic spirits of ammonia

Inelastic tourniquet (useful but not essential if there are adequate triangular bandages in the kit)

Scissors

¹ See page 172 for a discussion of first aid treatment of burns.

3-inch splinter forceps
 Paper cups
 1-inch and 2-inch roller bandages
 Wire or thin board splints
 Castor oil or mineral oil for the eyes
 Useful though not essential items include a few large safety pins, adhesive tape, a knife and a medicine dropper.

A small first aid kit for hiking or for the automobile should contain:

First aid instruction book
 1-inch adhesive compresses
 Sterile gauze pad (about 3 inches square)
 Sterile gauze pad (about 1 yard square)
 Triangular bandages
 Burn ointment
 Iodine (2%).

Any kit should be arranged so that the contents are all accessible, and the unused materials are not contaminated by handling. The unit type of prepared kit is superior to the ordinary commercial kit in these respects. The unit type is made up of packages of standard size, each containing one or more individual dressings or drugs (iodine, gauze pads, etc.). Contents and some simple instructions for their use are marked on each package.

It is wise to keep the first aid kit for the home as a separate unit in the medicine chest. After each use every kit should be carefully gone over and replenished.

From the *Reports*, April 1942.

FOOT DISORDERS

Though it is a commonly accepted belief that most foot troubles are due primarily to badly designed shoes or weakened muscles, recent researches show that this is not the case. With the single exception of the very high-heeled shoes worn by some women, which are unquestionably bad, shoes do not directly affect the foot function or "break down" arches. But badly fitted shoes can and often do cause painful corns and displacements of the toes.

Nor do weak muscles cause "fallen arches." If the arches were supported by the action of the muscles, "fallen arches" would develop as soon as a person relaxed or went to sleep.

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Actually, tests show that a great many foot disorders, resulting in painful feet and calluses, are a result of unequal weight distribution among the metatarsal bones. The common manifestations of such disorders are (1) an unbalanced posture accompanied by a rolling-in or "pronated" condition of the foot (so-called weak ankles), and (2) callus formation on the sole of the foot behind the second and third toes.

Such unequal distribution of weight may be the result of looseness of the joints and ligaments which bind the first metatarsal (directly behind the big toe) to the foot. Or the first metatarsal may be too short from birth, with the same result.

Competent treatment requires, first of all, recognition of the true cause of the disorder. Usually the first step in the treatment consists in removing the surface elements which cause the discomfort — painful calluses, corns and other skin growths. The second step is to relieve and repair the deeper inflammations. Rest of the feet and stimulation of circulation are the most fundamental means for restoring the strained muscles, irritated nerves and tissues.

A recommended method is the use of "contrast plunges" — plunging the feet first into hot water for one and a half minutes, then into cold water for one half minute. The hot water should be as hot as can be borne. This should be repeated five times, and then followed by a brisk rub with a coarse towel. A half hour of reclining immediately afterward is desirable. Such contrast plunges should be taken daily, preferably immediately after work.

Light exercises for improving the circulation are also useful at this phase of treatment.

From the *Reports*, April, 1943.

Disorders of the feet are responsible for many disturbances in other parts of the body. Cases of so-called "arthritis" of the bones, hips and sacro-iliac joints, and many backaches are caused by foot disorders.

Bunions can be cured only by operation. Advertised remedies—pads and specially built shoes—may give temporary relief if properly fitted and applied, but improperly fitted ones are worthless and may damage the foot.

Hard Corns are produced by the pressure of badly

fitted shoes. It is essential first to get a properly fitting shoe and thus ease the pressure. Then use the following treatment: soak the feet in warm water for about 15 minutes; dry thoroughly, and apply to the surface of the corn 1 or 2 drops of 10% salicylic acid in collodion (proprietary corn removers are usually of similar composition); wear a corn plaster over this. If the corn does not lift out after a few days of such treatment, a podiatrist or physician should be consulted. Because of the risk of infection, corns should never be removed by cutting.

Soft Corns are frequently associated with "athlete's foot" infections and do not, as a rule, yield to simple home methods. The services of a physician are generally necessary.

Perspiring Feet. Perspiration may be controlled by liberally sprinkling the feet with a dusting powder such as pure talc, U.S.P., or with equal parts of talc and boric acid powder. A 15% solution of aluminum chloride may be dabbed lightly on the feet at night, allowed to dry and then washed off in the morning. The feet and insides of the shoes should also be dusted with talcum powder and boric acid.

• "ATHLETE'S FOOT"

Virtually every one harbors the athlete's foot germ or fungus. The most important factor in bringing it out of hiding is foot moisture; the fungus also thrives in dead skin. Summer provides the most favorable conditions for infection, especially at beaches and in pools and showers, as well as through exercise and sweating.

Prevention: Treating shoes on the inside with formaldehyde or ultraviolet rays is a futile precaution because the fungus will become implanted in the shoes as soon as they are worn. Attention should be concentrated on keeping the feet dry rather than on avoiding contact with the fungus in public gymnasiums, swimming pools, etc. The former is vital, the latter is futile. And since most adults are already infected with the fungus, measures such as foot baths in those places are likewise futile.

But because the feet are likely to be moist after swimming or visits to gymnasiums, the toes and the area around them should be sponged with rubbing alcohol or $\frac{1}{2}\%$ tincture of iodine ("mild" or 2% tincture of

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iodine may be diluted with 4 parts water or alcohol to make a $\frac{1}{2}\%$ tincture). After the iodine or alcohol has dried on the skin, dust the feet liberally (especially the skin between the toes) with plain unscented talc and put a couple of shakes into your shoes and stockings. It is important to do this immediately, before putting on shoes and stockings.

Washing the space between the toes once or twice daily with alcohol or iodine will help remove dead skin and nail debris and will act as a mild anti-perspirant. Folded cigarette paper or small wads of lamb's wool placed between and under those toes most prone to infection will prevent chafing and absorb perspiration. This routine is particularly useful for persons whose feet tend to perspire freely.

Try to wear cotton or lisle hosiery; it provides the best ventilation of the toes and good absorption. Make sure that your shoes are sufficiently broad to permit movement of the toes. Shoes with perforated lasts will encourage cooling and ventilation of the feet.

Cure: Acute or active infection with the athlete's foot fungus produces various types of skin eruptions and discomfort. If you're hypersensitive to the fungus, you should be under the care of a physician, since the hypersensitivity will necessitate a careful use of drugs. In any case, injudicious application of drugs—salves or lotions—is apt to aggravate the infection. For this reason *avoid all proprietary remedies and cures for athlete's foot such as Absorbine Jr., Listerine, Pepsodent Antiseptic, Black & White Ointment, etc.* They are not compounded for individual requirements and sometimes aggravate rather than relieve. Avoid the so-called "Phenol-Camphor cure." It's more likely to burn the skin than cure the athlete's foot infection. Small cracks or tiny blisters between the toes should be given the treatment described above. If there is swelling, redness, marked blistering and itching, you should try to see a doctor. If this is impossible, bathing your feet in potassium permanganate solution at least twice daily for a half hour will be soothing. The solution is made by dissolving one five-grain tablet of potassium-permanganate in $1\frac{1}{2}$ quarts cold water.

Before going to bed, you can apply calamine lotion (with or without phenol) to diminish inflammation if the itching and swelling are still unrelieved. If you

haven't time for a potassium-permanganate foot bath before leaving the house in the morning, sponge your feet with alcohol or mild iodine tincture solution and apply dusting powder and cigarette paper or lamb's wool. Repeat each evening and change hosiery.

If this seems like a too-troublesome routine, remember that the condition is difficult to cure permanently and that a relapse will occur unless thorough precautions are taken. Of course, milder cases may require merely the use of a dusting powder once or twice a day to keep infection under control.

When the infection is characterized by thickening or extreme scaliness of the skin (usually on the soles of the feet), lotions or foot baths are less effective than salves. Doctors often purposely prescribe counter-irritant salves which cause scaling, but they are too hazardous for self-medication. The safest home remedy for relieving dryness of the soles is a bland ointment such as zinc oxide paste or boric acid ointment.

Bear in mind that by no means every skin eruption of the toes or feet is athlete's foot. If the disorder is severe or does not clear up with the remedies above, consult your doctor.

GLANDULAR (ENDOCRINE) PRODUCTS

The study of the endocrine glands has enabled physicians to treat successfully hitherto intractable disorders. Diabetes mellitus and diabetes insipidus, myxedema, Addison's Disease, disorders of the parathyroid gland and bones and certain disturbances in the function of the sex glands can be more or less successfully treated chiefly with hormones derived from natural sources or synthesized. These hormones are potent drugs which can be used safely and effectively only under the supervision of a skilled physician.

Besides these active products, more than a thousand unscientific glandular products are marketed to the medical profession and to the public—most of them useless, many potentially harmful. They were never more aptly described than as "heterogeneous mixtures of inert substances which include all but the hoof and hide of our domestic animals."

With few exceptions—notably thyroid and "stilbestrol"—those that are sold to be taken by mouth are worth-

less. Dried extracts of ovaries, pituitary gland, thymus, pineal gland, adrenal gland and testes are prepared and marketed for dwarfism, obesity, disorders in sexual function, hairiness of face or body, small or pendulous breasts, cold hands and feet and many other conditions. Not one or any combination of these oral gland products will have any effect on these symptoms. Those preparations that are valuable in medicine are also potentially dangerous and must be administered by a physician.

GOITER AND IODIZED SALT

The best means of preventing simple goiter is the use of iodized salt. One part of sodium or potassium iodide to 10,000 parts of salt (.01%) is recommended by public health authorities as the best iodized salt combination. It should be used instead of plain salt in every region of the country.

If simple or any other goiter is already present, no iodine preparation should be taken without the supervision of a physician, since harm can result. Iodized salt may aggravate acne.

From the *Reports*, May 1941.

HALITOSIS AND MOUTH WASHES

Halitosis has many causes. Diseases or abnormalities of the nose, throat or mouth will produce bad breath only if they are severe or of long standing. Sinus disease rarely causes bad breath. "Brown" morning taste may be cured or lessened by proper brushing of teeth before retiring. Temporary halitosis due to eating of garlic or onion is caused chiefly by absorption from the intestines of aromatic organic material, which is carried in the bloodstream to the lungs. Only an insignificant part of the odor is due to particles retained in the mouth or teeth. Swishing the mouth with a so-called antiseptic may rid it of these few particles, but the antiseptic can have no effect upon the intestinal absorption of the aromatic substance or its excretion by the lungs.

Some women tend to have a disagreeable breath odor for several days before the onset of menstruation. The cause of this odor is unknown, but since it is a systemic disorder, an antiseptic has absolutely no effect upon it. Likewise, constant smokers may have a characteristic bad breath which no amount of antiseptic will correct.

A coated tongue may or may not be associated with a

bad taste or bad breath or both. This tongue condition may in some cases be due to an excessive amount of fats in the diet. By balancing the diet and scraping and brushing the tongue, the breath may be made normal.

The commonest cause of habitual halitosis is disturbance in digestion and in absorption of fats. As a result of this disturbance, malodorous substances are produced and carried in the bloodstream to the lungs and then excreted into the breath. A change in the amount or character of fats in the diet may be necessary to correct the disorder; neither *Listerine* nor any other mouth wash can cure it.

HAY FEVER

The regions in North America entirely free from trees, grasses, weeds or their pollens are few indeed. But several cities and resorts are reported to have sufficiently low ragweed-pollen counts to offer at least some relief to the ragweed sensitive patient. Among these are Sacramento, Miami, Reno, Portland (Ore.), Seattle, Spokane, Prince Albert (Saskatchewan), Mexico City and the White Mountain resorts. The cost of vacationing in these regions, however, makes such a method for the treatment of hay fever impractical for most of the people so affected.

The use of air filters or conditioners gives protection, of course, only while the patient is in the room equipped with them.

Mask filters, worn over the nose and mouth, and nasal filters (such as *Dr. Weaver's Nasal Filter*) may keep pollen from entering the nose or throat but they do not prevent entrance of pollen into the eyes, so that only slight help is obtained. Besides such masks only substitute one type of discomfort for another; few people want to be muzzled or have their nostrils plugged.

Most successful and practical of the methods of preventing hay fever is the one known as immunization or desensitization. The symptoms—sneezing, watering eyes and dripping nose—occur mainly in certain seasons. The physician determines the pollens to which a patient is sensitive by taking a detailed history of the case, tracing seasonal occurrence of the fever, and also by skin tests. Gradually increased doses of the pollens are injected before the season begins, so that by the time the pollens are in the air, the patient has acquired partial or complete immunity.

(Continued next page)

If the injection method fails (as it does in about 20% of the cases), if it cannot be obtained in time, or if the service is unavailable for some other reason (often economic), the so-called "vaso-constrictor" drugs may give partial or temporary relief.

The most useful of these drugs in the opinion of modern doctors are:

Epinephrine Hydrochloride Solution 1:1000 U.S.P.

Ephedrine Hydrochloride or Sulphate U.S.P. 1% solution.

Neo-synephrin Hydrochloride $\frac{1}{4}$ of 1%.

Propadrine Hydrochloride 1%.

Benzedrine Solution 1%, and Benzedrine as widely used in the Benzedrine Inhaler.

All of these drugs, except for the last, are best taken in aqueous, or normal salt (isotonic) solutions; two or three drops in each nasal cavity several times daily is usually sufficient.

These drugs may temporarily diminish congestion of the mucous membrane, but they may cause undesirable side-effects, such as rapid or forceful beating of the heart, nervousness, faintness and insomnia. Sensitivity varies considerably in different persons, so that caution should be the watch-word when they are used. Unfavorable reactions are likely to be especially intense or serious with too frequent or indiscriminate use of the *Benzedrine Inhaler*.

Estavin drops for the eyes, popular for many years, are made from rose petals. Whatever effectiveness they have is probably due to the presence of an astringent agent similar to tannin.

HEARING AIDS

According to one authority, a hard-of-hearing person with an average hearing loss in the speech range of from 20 to 40 decibels (the unit in which loudness is measured) can get considerable help from a hearing aid, but usually prefers to get along without one. A person with a loss of from 40 to 60 decibels needs an aid and can benefit most from its use. A person with a loss of from 80 to 100 decibels is not likely to gain much from an aid, though some individuals in this group have benefited greatly.

Middle-ear impairment may result in fairly uniform hearing loss for different tones, while inner-ear impairment is generally characterized by sharply uneven

hearing loss for different tones. For this reason a person with middle-ear impairment is more likely to get satisfaction from a hearing aid than one with inner-ear impairment.

A hard-of-hearing person who is getting a hearing aid should understand that *no aid will enable him to hear conversation normally at first*. Since the aid amplifies all sound, the new user has to develop the faculty of listening only to the intelligible sounds and ignoring the others. Also, if the hearing loss is severe and has existed for a long time the user has to relearn the meaning of the sounds of spoken words. The new user of a hearing aid must not be too easily discouraged; even with moderate hearing loss some education in the use of the instrument is required.

The simplest type of hearing aid is the non-electrical accumulator — the ear trumpet or speaking tube. For chronic invalids or the aged, an inexpensive accumulator may sometimes be more satisfactory than an electrical aid. The chief disadvantage of the accumulator is that the speaker must talk directly into the horn.

There are two types of electrical aids — the carbon and the vacuum tube. The carbon type is cheaper to buy and to maintain and is less likely to get out of order. On the other hand, the vacuum tube type does a better job of amplifying tones of high and low pitch, resulting in more faithful reproduction of sounds. Both types can be fitted for either air or bone conduction. Unless the otologist prescribes one of these types, both should be tried, and the one which gives better hearing selected. If they are equally satisfactory, some authorities think that air conduction is preferable.

The first place for a hard-of-hearing person to go is to an otologist (a physician specializing in ear conditions). If the otologist advises a hearing aid, the next place to go, if possible, is to a Hearing Aid Clinic, where the individual's special requirements are studied, and where different hearing aids can be tried. This is important because no two persons have exactly the same requirements, and a hearing aid that is entirely satisfactory for one may be wholly unsatisfactory for another.

If you don't know of a Hearing Aid Clinic in your community, write to the Volta Bureau, 1537 35th Street, N. W. Washington, D. C.

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If it is impossible to go to a Hearing Aid Clinic, the following suggestions may help you select an instrument:

1. Go to the various hearing aid dealers, determined to base your judgment of the instrument in question only on your reaction to it—not on the persuasiveness of the salesman. In most companies salesmen are entirely dependent on their commissions for a livelihood—they do not get a salary. Furthermore, most companies require their agents and dealers to purchase their stock of instruments outright. They are, therefore, virtually forced into high-pressure salesmanship.

2. Have a friend with you—preferably the same one at all the dealers you visit. In listening to conversation with different hearing aids and comparing them, you should listen to the same voices. Besides, after trying out several different instruments you are apt to become confused as to their relative merits, whereas a friend, observing your responses may be able to help you recall the differences.

3. Write to the Graybar Electric Co., Room 1551, 420 Lexington Ave., New York City, for a copy of their free publication, "Words and Music," by Knibloe P. Royce. This is a list of sentences, scientifically devised to test the amplification of speech sounds covering a wide range, something that haphazard questions or general conversation for a short time may not do. Select a dozen or so of these sentences to use in testing each instrument you try. Keep a record of the words or sentences you miss, and use this comparative record to help you choose an instrument.

4. Consider the service facilities of the company whose instrument you plan to buy. The finest hearing aid may be useless if you cannot get adequate service—replacement of parts and repairs. If possible, get an instrument, the manufacturer of which has a dealer in your community. *Don't buy a hearing aid made by a foreign manufacturer or by a firm that has gone out of business.*

5. Insist upon a home trial of the instrument you feel is best for you. There are some companies that make it a policy not to give home trials; however, most reputable dealers will permit you to take an instrument home for a short time. A rental fee or deposit will be asked, but the rental fee should not exceed five per cent of the list price and should be deducted in case of purchase. A word of caution here: don't expect perfect results from your hearing aid in this home trial.

Remember that you have not learned how to use it properly and you have not become accustomed to it. You will probably not be able to hear well in theatres, churches or in large gatherings of people. You should notice a definite improvement, however, in hearing one or two persons in an average-sized room.

6. Consider carefully your special needs. If you plan to use your instrument primarily to hear the speech of one person at a time in fairly quiet surroundings, you will not need so powerful an instrument as you would if you work all day in a large, noisy office where instructions or questions are shouted from considerable distances. If you are a musician and want to improve your hearing of music you will need an instrument with a much greater frequency (pitch) range than does the average person who wants primarily to hear speech. If your hearing loss is not very great, and is not likely to become great, don't pay a premium price for a heavier, more powerful instrument.

To conserve hearing aid batteries, turn your instrument off when you are not using it. If possible, have enough "A" batteries on hand so that you can alternate them, using each battery for about four hours at a time. The "A" batteries will give you longer and better service if you let them "rest" in this way. This is not necessary with the "B" batteries, however. Keep your batteries cool. Insulate them from body heat with a small sheet of cork or other insulating material. When you are not using them, keep them in a refrigerator. In summer, it is a good idea to wear the batteries in rubber bags provided by some manufacturers, to keep perspiration from batteries.

Cost of hearing aids

Non-electrical accumulators can be purchased for as little as \$5. Electrical carbon instruments have been sold for from \$35 up. Portable vacuum tube instruments have generally been much more expensive, but as we go to press, the Zenith radio company is putting out a vacuum tube instrument for \$40. This instrument has not been tested or examined by Consumers Union; but since the high price of other instruments reflects the heavy costs of high-pressure selling, there is no reason why a satisfactory instrument cannot be sold for a fraction of the cost of other makes. CU suggests that you make an effort to try out the Zenith instrument

along with others; and don't let the salesmen for the others persuade you that it can't be good because it's cheap.

Some companies offer "reconditioned" instruments to customers who have an old instrument needing repairs. The cost is usually between \$15 and \$50 plus the old instrument. It is understood that these "reconditioned" instruments are often unused, but out-of-date hearing aids. They can, however, be good buys, especially if your present instrument is quite old.

For those who cannot afford to purchase a hearing aid, a Hearing Aid Clinic or a State Vocational Rehabilitation Bureau may provide some financial assistance.

From the *Reports*, January, March 1943.

INDIGESTION

Indigestion may be caused by organic disease of some part of the digestive tract (stomach ulcer, appendicitis, disease of the gall bladder) or by some disease entirely outside the digestive tract (scarlet fever, cold, heart disease, tuberculosis). A temporary poisoning, such as may result from excessive quantities of alcohol, may be another cause. Perhaps the commonest cause of indigestion is emotional upset.

A warm or tepid bath will often quiet nerves and thus relieve an attack of "gas," distention and belching associated with nervous indigestion. A compress of a hot wet towel spread over the entire abdomen is often very soothing (see "Physical Therapy," page 204).

A simple powder such as bicarbonate of soda (see "Alkalizers, page 167) may give some relief in mild cases of indigestion with "heart-burn." Prolonged or frequent use of alkalizers may, however, aggravate indigestion and also cause "alkalosis." Repeated attacks of "sour" or "acid stomach" demand medical attention.

Laxatives and cathartics should never be taken for an attack of "acute indigestion." The attack may be due to acute appendicitis, in which case a laxative or cathartic could cause rupture of the appendix and peritonitis.

See the *Reports*, October and November 1938 and July 1940.

From "Good Health and Bad Medicine," by Harold Aaron, M.D.

NOT ACCEPTABLE

The following products cannot be relied upon in cases of indigestion, and in some cases repeated use may be harmful:

Alka-Seltzer
Bell-Ans
Bisodol
Bromo-Seltzer

Citrocarbonate
Phillips' Milk of Magnesia
Sal Hepatica
Tums

INSOMNIA

Insomnia (sleeplessness) is a symptom that may be caused by many ailments. Elderly persons frequently are subject to temporary or chronic sleeplessness. Mild sedatives are usually necessary. Toxic insomnia results from unusual sensitivity to or excessive indulgence in coffee, alcohol or tobacco. Those readily affected should not drink coffee, tea or cola drinks for at least four or five hours before going to bed.

Insomnia due to physical illness responds to treatment of the underlying disease. Temporary nervous insomnia due to unusual emotional stress may be helped by a warm bath, a hot drink or both. *Ovaltine* and other "health drinks" supposed to relieve insomnia are of value only as hot drinks, and money spent on them is largely wasted. Drugs to induce sleep should never be taken without the advice of a physician because, although they are often effective, they may be habit-forming or cause undesirable reactions.

Frequent or persistent insomnia is a symptom of a nervous or psychological disorder and should be treated by a physician or psychiatrist.

LINIMENTS, POULTICES AND SALVES

Liniments are useful for the relief of muscular aches following hard exercise or exposure to wet and cold. Along with other measures prescribed by a physician, they may also be helpful for the relief of joint disorders and neuralgia. They will not, however, accomplish the wonders promised by the advertisements.

A liniment rubbed on the skin or used for massage should produce no more than a mild redness of the skin. Liniments or salves do not penetrate more than a minute distance below the skin surface. Claims such as *Baume Bengué's*, which indicate or imply penetration directly to muscles or deep painful regions, are misleading.

Most liniments are solutions or mixtures of irritating drugs in an oily, soapy or alcoholic base. Rubbing a sore

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muscle or back with a liniment causes a flow of blood to the sore area and thus tends to relieve the pain. As a matter of fact, the rubbing or massage may be more important than the liniment. In some cases, areas not immediately below the surface which is rubbed are benefited as the result of "reflex action."

Although many drugs are used as ingredients of liniments, the principal one is often alcohol. Liniments may contain turpentine, camphor and even red pepper. The only significant difference between the various liniments is in the degree of irritation they cause. Many are extremely irritating to the skin and mucous membranes, and serious burns, blisters or infections may result from their use. The skin of children particularly is likely to suffer from the application of a strong liniment such as *Sloan's*. Plain rubbing alcohol will probably cause the least irritation. Witch hazel is just as satisfactory and may be easier to obtain. Since the rubbing and kneading are most important, however, a simple mineral oil or cold cream may be used as a lubricant for massage.

A convenient and very effective method of home treatment is to apply hot wet compresses to the sore or aching part. A turkish towel soaked in hot water makes an excellent compress. A hot water bottle (not an electric pad) may be placed over the compress to prolong the heating effect. For some parts of the body where a compress cannot be applied, a heating lamp may be used to relieve soreness.

A mustard poultice will give prolonged counter-irritant effect, but should be used with caution on sensitive skins. Mustard plasters, more convenient than poultices, may be bought ready-made. They are applied to the chest and the back usually for about 20 minutes each. Sensitive skins, however, cannot tolerate such long application.

Rubbing salves for the treatment of "chest colds" or the "common cold" have little effect. Many, like *Penetro*, *Mustero*, *Mentholatum* and *Vicks' Vaporub*, contain menthol, camphor or volatile oils and give a sensation of warmth or irritation to the area of skin on which they are rubbed. A similar effect can be obtained with non-proprietary products such as Camphorated Liniment, U.S.P.

Other remedies are odd and irrational, such as *Iodex*, which contains a small amount of free iodine, and *Aspirub*, which contains aspirin. Neither iodine nor aspirin will pene-

trate directly from the skin to a deep inflamed area.

No preparation applied to the skin will reach the bronchial tubes or cure a cold or bronchitis. But an aching sensation in the chest which often accompanies a "common cold" or grippe may be relieved somewhat by rubbing on Camphorated Liniment or applying a mustard poultice or plaster, with due regard for sensitivity of the skin. Chest pain, however, may also be a symptom of lung infections, including pneumonia, and medical care is imperative if pain is associated with fever.

ACCEPTABLE

Rubbing Alcohol.

Camphorated Liniment, U.S.P.

Witch Hazel.

Mineral Oil or Cold Cream.

Bay Rum.

Oil of Wintergreen (diluted with an equal or double quantity of oil).

Mustard Plaster (see precaution in text).

NOT ACCEPTABLE

Because of irrational composition, misleading claims or excessively irritant effects:

Absorbine Jr.

Minard's Liniment

Aspirub

Minit Rub

Baume Bengué

Moone's Emerald Oil

Bet-u-lol

Musterole

OBESITY

Since the cause of overweight is eating more food than the body requires, the only effective cure is to reduce food intake. There is no other way and there are no short-cuts.

Exercise alone, it has been found, is of little value; in some cases, it may even be harmful. Furthermore, exercise usually promotes a ravenous appetite, so that it is harder than ever to adhere to a low-calorie diet.

"Slenderizing" massages do not cause loss of weight. It has never been proved that fatty tissue can be rubbed away from any part of the body.

Nor can the use of "dietetic foods" replace dieting. Many products of this type, such as *Thomas' Protein Bread*, lay stress on protein content. But all proteins yield calories, just as do starches.

Claims that drinking grape juice, *Welch's*, for instance,

will reduce weight have no foundation.

If quick reduction of weight is necessary for health or morale, a safe and rapid reduction course is possible. The best results are obtainable if the patient submits to medical supervision in a hospital or sanitarium.

There are advantages to slower weight loss: It can be carried out at home, comfortably and without upsetting work or recreation habits. And the low-calorie diet used establishes improved eating habits.

In losing weight through diet, it is necessary first to eliminate or minimize unessential foods — the sugars and starches. The former should be eliminated from all beverages and fruits. Saccharin is a harmless, calorie-free substitute which can be used for sweetening beverages. "Soft drinks" contain a high percentage of sugar and should be eliminated from the diet. Starchy foods, such as bread, potatoes, and corn should be avoided.

Fats are the highest of all foods in calorie value. Since they contribute so much to the palatability of foods, however, it is difficult to do without them entirely. But meats, poultry and fish high in fat content should be avoided and fried foods should not be eaten. Salads should be made without oil dressing; lemon juice or vinegar, alone or with spices, can be used instead. Alcoholic beverages have a high calorie value.

Foods permitted in a reducing diet include most of those that go to make up a normal, well-balanced diet. The only difference is in the quantity. The essential foods are: milk, eggs, meat, fish, fowl, cheese, fruits, vegetables and whole wheat breads or cereals.

Because of the calcium, vitamin B complex and protein value, it is a good plan to have a pint of whole or skim milk a day in any reducing diet. Skim milk or buttermilk has about half the caloric value of whole milk, and should be used in diets calculated to furnish less than 1000 calories a day. Pouring the cream layer off ordinary milk will not give a product quite as low in caloric value as commercial skim milk.

Lean meats, fish (including shellfish) or fowl should be eaten daily while reducing. Cottage cheese or pot cheese is the only cheese suitable for low-calorie diets. Eggs should be boiled or poached, not fried or scrambled.

Cooked or raw vegetables should be served at least

twice daily. For the very stringent reducing diet, choose only 16-calorie or 28-calorie vegetables (see table). An abundance of green or yellow vegetables — especially the leafy ones — will furnish adequate vitamin A.

Eat at least two servings of raw fruit daily.

Breads and cereals are concentrated foods, and should be minimized in a reducing diet. One slice of bread a day is the most that should be permitted. *Ry-Krisp* and similar products are generally low in calories but high in roughage. Those with sensitive digestive tracts should avoid them. All breakfast cereals, prepared or home-cooked, should be eliminated, since they are rich in calories.

If the caloric allowance permits the use of fats, those with vitamin A, such as butter and fortified margarine, should be preferred to meat fats or vegetable oils.

Since clear tea and coffee, mushrooms and soup made from bouillon cubes contain practically no calories, they can be used as desired. Water is not limited.

The 800-calorie diet described in the table will cause a loss of about eight pounds a month in an average case. It should be kept in mind, however, that frequently no weight is lost in the first weeks of dieting.

No diet containing less than 800 calories a day should be attempted without medical supervision. If the amount of weight to be lost is not great, or if you are satisfied with a more gradual loss, take more calories.

From the *Reports*, May, June 1943.

LOW CALORIE FRUITS AND VEGETABLES

(calories per hundred grams)

16-calorie vegetables: asparagus, beet greens, broccoli, cabbage, cauliflower, celery, chard, cucumbers, endive, escarole, lettuce, radishes, sauerkraut, spinach, Summer squash, tomatoes and tomato juice, rhubarb.

28-calorie vegetables and fruits: canned carrots, collards, eggplant, kale, kohlrabi, leeks, okra, parsley, peppers, pumpkin. Winter squash, turnips, blackberries, melons, strawberries.

40-calorie vegetables and fruits: brussel sprouts, beets, fresh carrots, fresh onions, canned peas, rutabagas; canned, unsweetened applesauce, water-packed apricots, blueberries, grapefruit, grapefruit juice, peaches, pears, limes, lemons, raspberries, tangerines.

(Continued next page)

800-CALORIE REDUCTION DIET*Note: There are approximately 30 grams in an ounce.*

	Household Measure	Weight Gm.
Breakfast		
28-calorie fruit	1 serving	100
Egg	1	50
Bread	1 slice	30
Butter	1 teaspoon	5
Luncheon		
Meat or fish.....	2 oz.	60
16-calorie vegetable	1 serving	100
28-calorie fruit or vegetable.....	1 serving	100
Skimmed milk	1 glass	200
Butter	1 teaspoon	5
Dinner		
Meat or fish.....	3 oz.	90
16-calorie vegetables		
(1 raw, 1 cooked).....	2 servings	200
40-calorie fruit or vegetable.....	1 serving	100
Skimmed milk	1 glass	200
Butter	1 teaspoon	5

PAIN

The value of rest for relief of pain and of physical measures such as hot or cold applications is insufficiently appreciated. Such measures are often far more effective than drugs. Thus, some types of headache will respond more quickly to a half hour of lying down or a cold compress or ice-bag on the forehead or head than to aspirin or other drugs. Neuralgic, shooting pains in the head or elsewhere will often be relieved by hot wet compresses or a hot water bottle (see "Physical Therapy," page 204).

Of the drugs advertised for the relief of pain, aspirin is probably the safest, but see page 172 for counterindications and further discussion of aspirin.

For the average person, one or two 5-grain tablets every three or four hours may have a relieving effect. Larger doses should be taken only at the direction of a physician. A large pinch of bicarbonate of soda should be taken with aspirin to diminish stomach irritation.

Analgesic (pain-killing) compounds often contain aminopyrine, acetanilid, acetophenetidin, cinchophen, or

similar drugs. Even single doses of acetanilid in average quantities (about 3 grains) can cause weakness, skin disorders, blood changes, etc., in very sensitive persons. Larger doses may cause restlessness, delirium and collapse. Death from heart failure may in rare cases occur after large doses are taken, particularly in those with heart trouble. But the main dangers of acetanilid are that it can lead to addiction and poisoning.

Antipyrine and acetophenetidin (also called phenacetin) are other drugs which may be present in "pain-killers." Their action is similar to that of acetanilid, but they are less toxic and less likely to cause addiction.

Aminopyrine and cinchophen are even more dangerous drugs than acetanilid and acetophenetidin. They should never be used except upon a physician's prescription. And a physician should, of course, be consulted in the event of any severe or protracted pain. Aminopyrine is responsible for a blood disease known as agranulocytosis, which has caused hundreds of deaths.

The Federal Food, Drug & Cosmetic Act requires that the labels of all remedies containing these drugs and sold in interstate commerce state the amount of drug present per dose.

Dysmenorrhea or menstrual pains are frequently relieved by rest, a warm bath (see page 204), and application of a hot-water bottle or ice bag (whichever proves better) to the lower abdomen. One or two aspirin tablets every two or three hours may be helpful. Avoid aminopyrine. Agranulocytosis is more likely to occur if aminopyrine is taken just before or during the period.

Earache requires immediate medical care, since it may be a symptom of pus in the middle ear or of mastoiditis. Considerable relief from pain may often be obtained from a hot-water bottle or a heat lamp (see page 204). No ear drops should ever be used unless prescribed.

Toothache requires immediate dental attention. Until this is available some relief can be obtained. A thick paste of bicarbonate of soda pressed into a cavity may give considerable relief if the cavity is accessible. If not, a small wad of absorbent cotton soaked in N. F. (National Formulary) Toothache Drops may be tried. One or two aspirin tablets may help.

Toothache waxes and drops commonly contain phenol (carbolic acid), but the N. F. drops above do not.

Headache is a symptom of many diseases, some of them serious. The occasional headache or aching feeling that so many of us get is often due to fatigue or nervous strain or to a cold. Such pain can be relieved by one or two aspirin tablets, hot or cold compresses on the head, and rest. If stronger remedies seem necessary, a more serious cause must be sought.

A great many proprietary headache remedies contain bromides. As with acetanilid, there is a danger of poisoning; and, like acetanilid, bromides taken in excessive doses or over long periods can cause or aggravate the very symptoms they were intended to relieve.

PHYSICAL THERAPY

Physical therapy is of value in many ailments, acute and chronic. But expensive electrical and light equipment are not ordinarily needed for home use. Massage, exercises, water, air, heat and sunlight are other means of physical therapy which can be effectively used.

● INFRA-RED RAYS AND HEAT

Infra-red rays are nothing more or less than heat rays. In the devices used, these may or may not be accompanied by light. Heat may be obtained as well from a hot-water bottle, hot wet packs, poultices and hot-water baths. The source used depends upon the area to be treated and whether local or general application is desired.

Local applications of heat are valuable in the treatment of arthritis, backache, bruises and sprains.

Because heat-lamps are generally more easily manipulated than methods of applying heat directly, they are sometimes preferable for home use. And often they can be used on regions of the body where pads, compresses or hot-water bottles can't.

You can get a satisfactory heat lamp in a hardware, department, drug or electrical supply store for \$2 or so. Such a lamp consists of a cup-shaped reflector attached to a stand or a rubber covered clamp. Because the latter type can be fastened to the back of a chair or the head of a bed, it is preferable. The most useful bulb for the lamp is a 250-watt Mazda CK.

Sometimes hot wet compresses are superior to other

methods of conveying heat. Sore muscles, a backache or an attack of "gas" may be relieved more readily by a hot wet compress than by a hot water bottle or heat lamp. The compress may be made by wringing out a thick cloth or towel in hot water and then applying it to the painful area. A rubber, gutta-percha or oiled silk sheet covering the compress will help to retain the heat and the moisture.

● DIATHERMY

The heat produced in the use of diathermy is generated within the body by the application of high-frequency electric current. Because of the depth of penetration, it is used by physicians for treatment of pain and certain other conditions in deep-seated structures of the body. The application of diathermy has many dangers, and it must never be used for self-treatment. *Do not buy or rent diathermy apparatus for use at home.*

● ULTRA-VIOLET RAYS

The number of ailments for which ultra-violet radiation may be used with benefit is not nearly so great as most people suppose. It is definitely known that ultra-violet ray exposure will *not* (1) permanently lower blood pressure, (2) prevent or relieve colds, (3) cure anemia, (4) prevent or cure baldness, (5) increase mental activity.

Ultra-violet may be beneficial for the cure and prevention of rickets, the treatment of some particular types of tuberculosis, and the healing of sluggish wounds. *For such conditions it must, however, be applied under medical supervision.* Even very short exposure to ultra-violet rays may produce, in some people, severe burns and conjunctivitis (inflammation of the eye). In certain sensitive persons repeated exposure may lead to degenerative changes or even to cancer of the skin. Kidney damage has also been reported following excessive exposure. Uncontrolled ultra-violet radiation is particularly dangerous in pulmonary tuberculosis, certain skin disorders, and in most infections accompanied by fever.

Since home treatment of rickets should not be attempted by the layman, sun lamps which are safe to use at home should be considered useful only in tanning the skin. And since it is not known that a tanned skin is any

healthier than an untanned one, the ultimate value of such lamps seems to depend on whether one finds a tanned skin attractive enough to warrant spending the money necessary to buy a good lamp.

POISON IVY AND POISON OAK

The best measure for the prevention of ivy poisoning is to learn to recognize the plant, so that it can be avoided. In the early Fall, when the danger of poisoning is greatest, the poison-ivy vine has characteristic glossy, dark green leaves with three leaflets, white berries and reddish stems. Poison oak is very similar to poison ivy.

Use of a yellow laundry soap (*Fels-Naphtha* or *Kirkman's Borax*) under a shower almost immediately after exposure will frequently remove the poison before inflammation sets in. Ordinary toilet soap is less effective. Once blisters or reddened itching areas appear, soap and water will cause further irritation and should be avoided. The application of calamine lotion or cold wet dressing (see "Antiseptics," p. 167) will relieve the inflamed skin somewhat. Some doctors have had success with the use of hypodermic injections of poison-ivy extract, for prevention. It is less effective after inflammation has set in. A method of oral immunization against poison-ivy is being tried now but is not yet available for general use.

SKIN AND SCALP DISORDERS

• ACNE

Acne is a skin disorder occurring chiefly in adolescence. The multitude of remedies applied in its treatment is simply a reflection of the fact that the fundamental cause is unknown. Much can be done, however, by the intelligent use of the following treatments.

All specialists stress the value of local measures. These include the liberal use of soap and water and the application of a lotion such as *Lotio Alba* freshly prepared, or a lotion containing resorcin or sulfur, with the object of keeping the skin somewhat dry. The scalp must always receive attention. Comedones or blackheads and pustules should be carefully extracted or evacuated. Picking or squeezing of pimples is, however, forbidden.

In most instances Roentgen (x-ray) therapy administered by a specialist is effective, but is not used un-

less local remedies (lotions, salves, etc.) have failed materially to benefit the condition in a period of one or two months. X-ray treatments are seldom given before the age of 15 to 17. Hair on the face is not caused or aggravated by x-ray treatment. Remember that x-ray treatment is dangerous except in the hands of a medical specialist.

Any evident dietary irregularities are corrected and most patients are told to discontinue taking chocolate and certain other foods such as sea food, cheese and nuts. Iodized salt is prohibited by most doctors. Patients are encouraged to eat a well-balanced diet containing fresh fruit, vegetables, green salads, milk and lean meats. It is not believed, however, that indiscretions in diet are the cause of or the precipitating factor in most patients with acne. Carbohydrate foods or sweets (except for chocolate in some cases) have no influence on development of acne.

Vitamin preparations have no influence on acne. Yeast, including *Fleischmann's Yeast*, may make acne worse.

Sunlight or artificial ultra-violet rays are temporarily useful in producing peeling of the skin. In most cases no permanent cure is obtained from sunlight.

Acne of the chin and around the mouth is more resistant to treatment than acne in other areas. Consequently, expert medical care should be sought at once before scarring and disfigurement occur.

● DANDRUFF & BALDNESS

It is normal to lose a small amount of hair daily and to have a small amount of dandruff and oiliness of the scalp. However, when dandruff and falling hair become excessive, it is an indication of a scalp abnormality requiring medical care.

The so-called "dandruff" germs found in dry or oily scalps are not the cause of dandruff. And neither dandruff nor oily scalp is a direct cause of baldness. It is probable, however, that the tendency to all three conditions runs in families.

There is no proof that use of vitamins internally or externally has any effect on scalp disorders.

Proper local care of the scalp consists of a shampoo about once weekly with a plain soap, oil shampoo or tar shampoo. This will do more for the ordinary case

of dandruff than any hair tonic. And brushing the hair vigorously for 5 to 10 minutes twice a day provides much better massage and stimulation of the scalp than can be obtained by commercial massage or vibratory devices.

The value of almost all hair tonics is dependent to a large extent upon their alcohol content. While there is no harm in the use of such hair tonics, claims that they will prevent or cure falling of the hair are false. And all hair remedies are unsatisfactory substitutes for competent medical treatment of serious or chronic hair or scalp disorders.

The following formula can, however, be used as a cleansing agent and lotion for combating dandruff to supplement your regular shampoo. It can be prepared by druggists:

Chloral Hydrate	4.0
Salicylic Acid	4.0
Glycerin	6.0
Alcohol }	Enough of each to make 240.0
Water }	

A few persons may find this lotion irritating because of sensitivity to one or more ingredients. If you notice any irritation, discontinue use of the lotion immediately.

Enough of the lotion to cover the entire scalp should be rubbed in with finger tips every night for a week. Then the scalp should be shampooed. The application of lotion and shampoo should be continued for several weeks or until most of the dandruff has disappeared.

From the *Reports*, September 1941.

● ECZEMA

The term "eczema" has been used to cover a multitude of skin disorders. It is actually a disease of the skin having many causes and manifesting itself as red, itching and discharging sores, spread over large areas.

This condition is often a serious one, and in most cases can be successfully treated only by a competent dermatologist. Eczema may be aggravated or made chronic by wrong treatment with patent medicines. For temporary relief of the itching, calamine lotion may be dabbed on, or cold wet compresses of boric acid, sodium bicarbonate or Burow's solution may be applied (see "Antiseptics," p. 167).

SORE THROAT

Whenever possible, a child who has a sore throat should be attended by a physician, since diphtheria, septic sore throat, scarlet fever, rheumatic fever, or some other serious infection may be the cause of it.

The pain of an inflamed throat can be relieved considerably by taking hot drinks frequently. Either milk or tea may be used; the addition of butter or honey confers no additional virtue. An ice collar or a cold, wet compress may be kept around the neck. A hot salt-water gargle (half teaspoonful of salt to a glass of hot water) every hour or so may give comfort. "Antiseptic" gargles are of practically no value.

Inexpert swabbing of the throat with argyrol or other preparations is not only useless but frequently harmful, since it may spread infection. If sore throat is accompanied by fever, rest in bed and medical care are imperative.

TONICS AND STIMULANTS

Tonics are advertised for poor appetite, insomnia, anemia, underweight, lack of pep, easy fatigability, sexual "weakness," "lost manhood," "female weakness" and other symptoms. Each of these symptoms is due to an underlying disorder which may require considerable investigation by a physician.

Chronic fatigue without organic cause is often a symptom of vitamin deficiency or of certain nervous disorders. When it is associated with nervousness, jitteriness or depression, it is called nervous exhaustion or neurasthenia. A deep-seated psychological or emotional maladjustment may be the cause of the symptoms. A frank discussion with a physician may help; often treatment by a psychiatrist may be necessary. Fatigue may be associated with a lack of satisfaction in sexual performance, or with other difficulties which a psychiatrist will know best how to treat. No matter what the cause of the fatigue, it will not be relieved by any proprietary medicine exploited to the public.

Gelatin may make a pleasant dessert, but it will not increase athletic performance, relieve fatigue or perform other advertised miracles.

Many other substances besides gelatin have been proposed for increasing physical endurance. Dextrose or

210 TONICS

ordinary sugar is helpful only during performance of severe physical exertion when the body supplies of sugar are temporarily depleted. For ordinary exertion and sport the sugar derived from good foods is sufficient.

There is no evidence that alkalizers and phosphate drinks increase endurance or relieve fatigue. Caffeine, a drug present in coffee, chocolate and cocoa, and in the cola drinks, has a definitely stimulating effect on the body and mind. But this effect is slight (in some persons negligible) and too often it is soon followed by a depression of both physical and mental efficiency.

"Iron tonics," advertised to the public for anemia, lack of pep, etc., contain an insignificant amount of utilizable iron compared with the amount of alcohol they provide. The temporary sense of well-being or improved appetite resulting from the tonics is due chiefly to the alcohol.

Amphetamine or *Benzedrine Sulfate* is a recently introduced and powerful stimulant, but its action is so unpredictable in many persons, and its toxic properties are so numerous and dangerous that it should be taken only under supervision of a physician.

Physicians prescribe tonics only as supplements to other treatment. Proprietary tonics encourage delay in seeking medical care. If they have any effect, they either mask the symptoms and give a false sense of security to the patient or cause irritation of the stomach and intestines. There are no known tonics specific for the ailments of women, even though many are widely advertised as such.

The following are a few of the brands on the market to which one or all of the above comments apply:

NOT ACCEPTABLE

Bradfield's Female Regulator.	Ovaltine.
Cardin.	Ovoferin.
Cox's Gelatin.	Prunidia.
Gude's Pepto-Mangan.	S.S.S.
Ironized Yeast.	Shapeley's Vegetable Prescription.
Kelp-a-Malt.	Tall's Female Tonic.
Peruna.	Tanlac.
Knox's Gelatin.	Tastyeast.
Lydia Pinkham's Vegetable Compound	

Toilet Goods & Cosmetics

Toilet goods and cosmetics have not been particularly hard hit, although containers and alcohol supplies are major problems for manufacturers. With metal containers out for the duration, plastics and cardboard are being used as substitutes.

Toilet waters and cologne are hard to get. Face powder is plentiful. Shampoos, face and hand lotions, lipsticks and rouges, can all be bought but the price is higher.

The shortage of fats and oils has affected soap production. Steps have been taken by the Government to increase the output of toilet soap, but rationing may have to be resorted to in 1944 if the present demand continues.

ASTRINGENTS AND FACE LOTIONS

No astringent or face lotion will "refine enlarged pores," "remove wrinkles" or perform other advertised miracles. Most of them are simply mixtures of alcohol and water, with a little perfume and coloring matter. These are generally harmless to normal skin, although they have a drying tendency if used too often. Ingredients, such as carbolic acid, coloring matter or even perfumes may cause serious irritation in some especially sensitive skins.

The temporary "shrinking" of the pore openings which these astringents produce can be obtained much less expensively with ice, cold water or such alcohol solutions as witch hazel, bay rum or lavender water. People with dry skins should avoid use of alcohol solutions.

CLEANSING TISSUES

The features considered in testing and rating cleansing tissues were similar to those used in the analysis of toilet tissues (see page 283). One difference between the two products is that nearly all the natural softness and absorptiveness of the original paper is retained in cleansing tissues; the necessary strength is furnished by packing the tissues either two- or three-ply.

Three of the thirty brands tested were packed three-ply; the rest were double sheets. A 500 sheet box of the latter contains 250 units; the same size box of the former has 167 units. Triple sheets tend to be lighter and thinner than the double sheets.

(Continued next page)

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Softness was not considered in the ratings because variations in degree of softness were too small to be significant. Prices in the ratings are given in terms of the cost of a box of 500. If this was not available, the cost of the largest box available is given.

In general, lighter paper is being used than in the past, and really white tissue is no longer available because of the shortage of chlorine bleaching agents.

Unless otherwise indicated, prices given are for 500 single sheets or 250 double sheets, each 9x10 inches.

From the *Reports*, June 1942.

BEST BUYS

The following tissues of the "Acceptable" list were judged to offer the best value for the money.

Nacella (F. W. Woolworth Stores). 20¢.

Colonial (Pender Grocery Co., Norfolk, Va.). 17¢. Labeled 9" x 10"; actually 8½" x 10".

Queen Anne (A&P Stores). 16¢.

ACCEPTABLE

(*In order of quality*)

Nacella (see "Best Buys").

CD Cat. No. X 6611 (Cooperative Distributors, NYC). 25¢.

Sitroux (Sitroux Co., Inc., NYC). 25¢. 8½" x 9¾".

Princess (American Stores, Inc., Philadelphia). 8¢, 2 for 15¢. 200 sheets, 8½" x 9¾". Cost per 500 sheets, 18.8¢.

Co-op Verisoft (National Cooperatives, Inc., Chicago). 23¢.

Pond's (Pond's Extract Co., NYC). 23¢. 8½" x 9¾".

Jean LaVerne (Owl Drug Co., San Francisco). 21¢.

Betty Woods (Betty Woods Laboratories, Hollywood, Cal.). 23¢.

Lexington (Bloomingdale's, NYC). 25¢.

Utility (R. H. Macy & Co., NYC). 31¢.

Lady Dainty (Safeway Stores). 19¢. 8½" x 10".

Colonial (see "Best Buys").

Patricia Allen (Sontag Drug Stores, Los Angeles). 9¢. 200 sheets, 8" x 9". Cost per 500 sheets, 22.5¢.

Blue Diamond (Hearn's, NYC). 23¢.

Klenzo (Rexall Drug Stores). 23¢.

Belle Fleurs (San-Nap-Pak Mfg. Co., NYC). 21¢. 8" x 9".

Elizabeth Post (S. H. Kress Stores). 10¢. 230 sheets. Cost per 500 sheets, 21.7¢.

Queen Anne (see "Best Buys").

ACCEPTABLE—CONT'D

Martha Washington (San-Nap-Pak Mfg. Co.). 25¢. 600 sheets. Cost per 500 sheets, 21¢.

Sanettes (San-Nap-Pak Mfg. Co.). 12¢. 200 sheets. Cost per 500 sheets, 30¢.

Perfection (Walgreen Drug Stores). 25¢.

Jean Arlen (Hearn's). 26¢.

Park Royal (San-Nap-Pak Mfg. Co.). 13¢. 2 for 25¢. 300 sheets, 8" x 9". Cost per 500 sheets, 21¢.

Venida (Rieser Co., Inc., NYC). 25¢. Labeled 9" x 10"; actually 8½" x 9½".

T.M.C. (T.M.C. Products, NYC). 15¢. 200 sheets. Cost per 500 sheets, 37.5¢.

Countess Lydia Gray (San-Nap-Pak Mfg. Co.). 21¢. Labeled 9" x 10"; actually 8½" x 9¾".

Society (Walgreen Drug Stores). 25¢. 9" x 9".

Louise Andre (Emporium, San Francisco). 29¢. Labeled 9" x 10"; actually 8½" x 9¼".

Barbara Lane (Whelan Drug Co., NYC). 13¢. 2 for 25¢. 200 sheets, 8½" x 10". Cost per 500 sheets, 31¢.

Loress (Personal Products Corp., Milltown, N. J.). 2 boxes for 25¢ plus postage, 200 sheets, 8½" x 9¾". Cost per 500 sheets, 31¢.

Broadway-Hollywood (Broadway Dep't Store, Los Angeles). 45¢. 250 sheets, 12" x 15". This is equivalent to 500 sheets of 9" x 10".

Super Fyne (Red & White Corp., Chicago). 23¢.

Soflin (National Retailer-Owned Grocers, Inc., Chicago). 17¢. 8½" x 9¾".

Chee-Kist (F. W. Woolworth Stores). 20¢. 8" x 9¼". Packed three-ply.

Micron Feathersoft (Whelan Drug Co., NYC). 25¢.

Hazel (National Tea Co., Chicago). 22¢. 8½" x 9¾".

Lyncrest (W. T. Grant Co.). 25¢. Packed three-ply.

Fina (Liggett's Stores). 21¢. 8½" x 10". Packed three-ply.

Planet (Biltmore Paper Co., NYC). 9¢. 200 sheets, 8" x 10". Cost per 500 sheets, 22.5¢.

Kleenex (International Cellucotton Products Co., Chicago). 13¢. 200 sheets, 8½" x 9¾". Cost per 500 sheets, 32.5¢.

NOT ACCEPTABLE

Gimbel's 808 (Gimbel Bros.). 23¢. 8½" x 9¾". Had low strength and very low absorption

CUTICLE REMOVERS

Cuticle removers consist of a strong alkali dissolved in water and glycerin, to which perfume may be added. Since the manufacturing processes are not always carefully controlled, commercial brands may at one time or another contain an excess of alkali, which may permanently damage the fingernails.

Cuticle removers which are strong enough to dissolve the cuticle are not safe to use. The top layer of the skin is of the same general composition as the cuticle and as the cuticle dissolves, an appreciable amount of the skin near it may come off with consequent irritation and possible infection.

If the remover is sufficiently diluted to be safe, it will be less effective. In fact, it may be better to use warm soapy water instead; simply soak your fingertips in water, and push back the cuticle with a towel or an orange stick wrapped with cotton.

Cutting the cuticle may result in injury to the flesh around the nails, and consequent infection. Even if this does not happen cutting tends to roughen the cuticle.

DENTIFRICES

The sole function of a dentifrice is to aid the tooth-brush in keeping the teeth clean. Claims for special ingredients to do anything more are unfounded. There is no proof to support claims for digestive ferments in some products, supposed to remove "film," nor is there even evidence that removal of "film" is necessary or desirable. "Alkalinating" agents and antiseptics may actually irritate the mouth tissues; besides, a dentifrice is in the mouth too short a time to be effective in neutralizing mouth acids or combatting bacteria.

Although carbohydrates are believed to foster tooth decay, some dentifrices contain starch (a carbohydrate). The amounts probably are too small and are rinsed out of the mouth too quickly to cause damage, but the presence of starch is noted in CU's ratings.

Potassium chlorate and sodium perborate are dangerous substances which don't belong in dentifrices. Prolonged use of the former may be injurious to the general health of the user; the latter should be used only under the supervision of a dentist or physician. Dentifrices containing charcoal should not be used. Cases have been re-

ported where charcoal has become embedded at the gum line, with removal possible only by surgery.

Gum massage is essential to mouth hygiene, but the tooth brush or the finger will do the job without the aid of any special dentifrice.

Bad breath may be caused by eating certain foods, or by some diseases, or it may indicate tooth decay or a disease of the mouth. The strong odor of peppermint, clove or cinnamon may mask bad breath temporarily, but no dentifrice can cure it.

The choice between pastes and powders is essentially a matter of individual preference. The basic formula of both is the same; pastes have a binder like glycerine added to give the proper consistency. Powders are generally more economical to use. A good tooth powder to use is precipitated chalk, U.S.P., which can be bought at any drug store in pound tins. If you wish to flavor it, add four or five drops of either oil of peppermint or oil of wintergreen to each four ounces of powder.

Liquid dentifrices have been promoted on the claim that they contain no abrasive material. However, they sometimes stain the teeth, and manufacturers of liquid dentifrices themselves often recommend the occasional use of an abrasive toothpaste or powder.

A dentifrice should not be very abrasive. Powders should be neither too fluffy nor lumpy nor caked. Pastes should be neither too thick nor too thin; they should retain their consistency at room temperature and should show little change with heat or cold. Liquids should pour readily but not too freely. All these factors were covered in CU's tests, along with degree of alkalinity or acidity, and the presence of sodium perborate, potassium chlorate and starch.

From the *Reports*, September 1942.

TOOTHPASTES

BEST BUYS

The following brands of the "Acceptable" list were judged to offer the best value for the money.

Milk-i-dent Dental Cream (Trade Laboratories, Inc., Newark, N. J. Sold at Woolworth's). 5.6-oz. tube, 20¢; cost per oz., 3½¢.

CD (Cooperative Distributors, NYC). 3.8-oz. tube, 19¢; cost per oz., 5¢.

(Continued next page)

ACCEPTABLE

(In order of increasing cost per ounce, but see comments)

Milk-i-dent Dental Cream (see "Best Buys").

Craig-Martin Tooth Paste (Comfort Mfg. Co., Chicago, Ill. Sold at Woolworth's). 5.2-oz. tube, 21¢; cost per oz., 4¢. Contained starch.

CD (see "Best Buys").

McKesson's Magnesia Tooth Paste (McKesson & Robbins, Bridgeport, Conn.). 2½-oz. tube, 2 for 29¢; cost per oz., 6¢.

Macy's Foamy Tooth Paste (R. H. Macy, NYC). 4-oz. tube, 23¢; cost per oz., 6¢.

Macy's Wintergreen (R. H. Macy). 4½-oz. tube, 26¢; cost per oz., 6¢.

Best Tooth Paste (distrib., Whelan Drug Co., NYC). 3 1/5-oz. tube, 20¢; cost per oz., 6¢. Tended to harden on standing.

TMC Tooth Paste (May Dep't Stores, Los Angeles, Calif.). 4½-oz. tube, 29¢; cost per oz., 6½¢.

Phillips' Milk of Magnesia (Chas. H. Phillips Chemical Co., NYC). 3.6-oz. tube, 24¢; cost per oz., 6½¢. Contained starch.

Scientific Tooth Paste (distrib., H. S. Kress Co., NYC). 1¾-oz. tube, 10¢; cost per oz., 7¢. Tended to harden on standing.

TMC Tooth Paste for Massaging Gums (May Dep't Stores). 4½-oz. tube, 29¢; cost per oz., 7¢. Tended to harden on standing.

Macy's Mint Flavored Tooth Paste (R. H. Macy). 2½-oz. tube, 18¢; cost per oz., 7¢.

Macy's Alkalinating Tooth Paste (R. H. Macy). 3-oz. tube, 21¢; cost per oz., 7¢.

Kleenrite Tooth Paste (Rite Laboratories, Los Angeles, Calif.). 3¼-oz. tube, 23¢; cost per oz., 7¢. Contained starch.

Goldblatt's Bond-Mint Flavored (Goldblatt Bros., Chicago, Ill.). 3 1/5-oz. tube, 23¢; cost per oz., 7¢.

Gimbel's Dental Cream (distrib., Gimbel Bros., NYC). 3½-oz. tube, 25¢; cost per oz., 7¢.

Gimbel's Tooth Paste (Gimbel Bros.). 3½-oz. tube, 25¢; cost per oz., 7¢.

Triplemint Tooth Paste (Sheffield Co., New London, Conn.). 1¾-oz. tube, 10¢; cost per oz., 7½¢. Tended to harden on standing.

ACCEPTABLE—CONT'D

PS Dental Cream Containing Magnesia (distrib., Associated Merchandising Corp.¹). 2½-oz. tube, 19¢; cost per oz., 7½¢. Tended to separate on standing.

ADS Dental Paste (American Druggists Syndicate, Inc., NYC). 2¼-oz. tube, 2 for 33¢; cost per oz., 7½¢.

Dr. West's Tooth Paste (Weco Products Co., Chicago, Ill.). 2-oz. tube, 15¢; cost per oz., 7½¢. Contained starch.

Ward's Mint Tooth Paste Cat. No.—3898 (Montgomery Ward & Co., Chicago, Ill.). 2.5-oz. tube, 21¢; 2 for 39¢; cost per oz., 8¢. Tended to harden on standing.

Mador Milk of Magnesia Tooth Paste (Mador, Inc., Chicago, Ill.). 3-oz. tube, 23¢; cost per oz., 8¢. Weight of contents not stated on package. Contained starch.

Schulte Milk of Magnesia Tooth Paste (A. Schulte, NYC). 3-oz. tube, 25¢; 2 for 45¢; cost per oz., 8¢.

Listerine Tooth Paste (Lambert Pharmacal Co., St. Louis, Mo.). 4.1-oz. tube, 33¢; cost per oz., 8¢. Tended to separate on standing.

Macy's Soapless Tooth Paste (R. H. Macy). 3-oz. tube, 24¢; cost per oz., 8¢. Tended to separate on standing.

Co-op Tooth Paste (National Cooperatives, Inc., Chicago, Ill.). 3.2-oz. tube, 25¢; cost per oz., 8¢.

Hearn's Blue Diamond Tooth Paste, Mint Flavor (Hearn's, NYC). 4-oz. tube, 31¢; cost per oz., 8¢.

Hearn's Blue Diamond Tooth Paste (Hearn's). 4-oz. tube, 31¢; cost per oz., 8¢. Tended to separate on standing.

Ward's Dental Cream Cat. No.—3899 (Montgomery Ward). 2½-oz. tube, 21¢; 2 for 39¢; cost per oz., 8½¢.

Britten (United Drug Co., Boston). 4½-oz. tube, 39¢; cost per oz., 8½¢.

Walter's Tooth Paste for Massaging Gums (Sears' Approved). Cat. No.—4324 (Sears-Roebuck). 2½-oz. tube, 23¢; cost per oz., 9½¢; 2 for 39¢; cost per oz., 8¢. Tended to harden on standing.

Squibb Dental Cream (E. R. Squibb & Sons, NYC). 5-oz. tube, 49¢; cost per oz., 10¢.

Schulte Mint Tooth Paste (A. Schulte). 2½-oz. tube, 25¢; cost per oz., 10¢. Tended to harden on standing.

¹ For a list of AMC stores, see page 10.

(Continued next page)

ACCEPTABLE—CONT'D

De Haven Tooth Paste (distrib., Pennsylvania Drug Co., NYC). 2½-oz. tube, 23¢; cost per oz., 10¢. Consistency rather thick at all temperatures.

The Fair Tooth Paste (The Fair, Chicago, Ill.). 3¾-oz. tube, 39¢; cost per oz., 10½¢.

Klenzo Dental Creme (United Drug Co.). 3½-oz. tube, 39¢; cost per oz., 11¢.

Forhan's for the Gums (Forhan's, Div. Zonite Products Corp., New Brunswick, N. J.). 3½-oz. tube, 39¢; cost per oz., 12½¢.

Pepsodent (Pepsodent Co., Chicago, Ill.). 3-oz. tube, 39¢; cost per oz., 13¢. Tended to separate on standing.

Regum (Norwich Pharmacal Co., Norwich, N. Y.). 1¾-oz. tube, 25¢; cost per oz., 1.4¢. Contained starch.

Halesworth Tooth Paste (Hale Bros. Stores, Inc., San Francisco). 2¼-oz. tube, 33¢; cost per oz., 14½¢.

Ipana Tooth Paste (Bristol-Myers Co.). 2.6-oz. tube, 39¢; cost per oz., 15¢.

Kolynos Tooth Paste (Kolynos Co., New Haven, Conn.). 2-oz. tube, 39¢; cost per oz., 19½¢. Tended to separate.

NOT ACCEPTABLE

(In alphabetical order)

Approved Dental Cream Cat. No.—5746 (Sears-Roebuck & Co.). 5-oz. tube, 30¢; cost per oz., 6½¢; 2 for 59¢; cost per oz., 6¢. Excessively abrasive. Contained starch.

Bonded Tooth Paste (William A. Webster Co., distrib., Sontag Drug Co.). 4-oz. tube, 27¢; cost per oz., 7¢. Excessively alkaline; variable consistency and abrasiveness.

Boriclor (Borine Mfg. Co.). 2-oz. tube, 39¢; cost per oz., 19½¢. Some separation of liquid at room temperature. Weight not stated. Contained ipecac 3%, potassium chlorate 16%, borine 20%.

Bost Tooth Paste (Bost Tooth Paste Corp.). 2.4-oz. tube, 32¢; cost per oz., 13½¢. Contained starch. Tended to thin out on standing.

Brundage Improved (J. R. Brundage, Inc.). 4.6-oz. tube, 20¢; cost per oz., 4½¢. Separated on standing.

Brytor (distrib., Steinway Drug Stores). 2¼-oz. tube, 23¢; cost per oz., 10¢. Variable consistency at room temperature. Tended to liquefy on standing.

Castilla Tooth Soap (Castilla Products, Inc.). 1¾-oz.

NOT ACCEPTABLE—CONT'D

tube, 35¢; cost per oz., 25¢. Excessively alkaline.

Charcoal Tooth Paste (Morin Co.). 1-oz. tube, 10¢; cost per oz., 10¢. Contained starch. See text for objection to charcoal.

Colgate Ribbon Dental Cream (Colgate-Palmolive-Peet). 3½-oz. tube, 37¢; cost per oz., 10¢. Became quite liquid on standing. Excessively abrasive. Contained starch.

Dan-O No. 33 Formula Tooth Paste. (Daniel Distributing Co.). 3.8-oz. tube, 23¢; cost per oz., 6¢. Tubes tested leaked. Liquid separated. Contained starch.

Detoxol Tooth Paste (Merrell Co.). 3½-oz. tube, 39¢; cost per oz., 12¢. Consistency at room temperature unsatisfactory—very thin.

Gilbert's PMG Tooth Paste (Gilbert Laboratories). 3-oz. tube, 39¢; cost per oz., 13¢. Tubes tested leaked. Strong, unpleasant odor. Tended to liquefy on standing. Excessively abrasive.

Iodent No. 1 (Iodent Chemical Co.). 3 3/5-oz. tube, 37¢; cost per oz., 10½¢. Tended to liquefy on standing. Excessively abrasive.

Iodent No. 2 "For Teeth Hard to Bryten" (Iodent Chemical Co.). 3 3/5-oz. tube, 37¢; cost per oz., 10½¢. Tended to liquefy on standing. Excessively abrasive.

Mi31 Tooth Paste (United Drug Co.). 5¼-oz. tube, 50¢; cost per oz., 9½¢. Excessively abrasive.

Oraline Tooth Paste (S. S. White Dental Mfg. Co.). 2-oz. tube, 25¢; cost per oz., 12½¢. Consistency at room temperature too thin. Tended to liquefy on standing.

PS for Massaging Gums (Associated Merchandising Corp.). 2¼ oz. tube, 19¢; cost per oz., 7¢. Con-East; in the West—25¢; cost per oz., 11¢. Tended to harden on standing.

PS Mint Flavored Tooth Paste (Associated Merchandising Corp.). 2¾-oz. tube, 19¢; cost per oz., 7¢. Contained starch. Tended to harden on standing.

Pebeco Regular Tooth Paste (Lehn & Fink Products Corp.). 3½-oz. tube, 39¢; cost per oz., 12¢. Contained potassium chlorate. Tended to harden on standing.

Rexall Milk of Magnesia with Precipitated Chalk (United Drug Co.). 3½-oz. tube, 33¢; cost per oz., 9¢. Excessively abrasive.

Sanikleen with Milk of Magnesia (Sanikleen Products Co.). 5-oz. tube, 20¢; cost per oz., 4¢. Consistency at

NOT ACCEPTABLE—CONT'D

room temperature too thin. Excessively abrasive.

Spearmint Tooth Paste (Wrigley Pharmaceutical Co.).

2-oz. tube, 10¢; cost per oz., 5¢. Excessively abrasive. S.T. 37 (Sharp & Dohme). 1½-oz. tube, 25c; cost per oz., 14½¢. Contained hexylresorcinol, antiseptic known to cause irritation. Tended to separate on standing.

Walgreen's Magnesia Tooth Paste (Walgreen & Co.).

2½-oz. tube, 2 for 29¢; cost per oz., 6¢. Liquid separated at room temperature.

Worcester Salt Tooth Paste (Worcester Salt Co.). 3-oz. tube, 39¢; cost per oz., 13¢. Tended to separate on standing.

TOOTH POWDERS**BEST BUYS**

The following brands were judged to offer the best value for the money.

Ward's Cat. No.—4328 (Montgomery Ward). 7-oz. can, 24¢; cost per oz., 3½¢.

Co-op (Stevens-Wiley Mfg. Co., Inc., Phila.; distrib., Eastern Cooperative Wholesale, Bklyn, NY). 6-oz. can, 27¢; cost per oz., 4½¢.

ACCEPTABLE

(In order of increasing cost per ounce)

Ward's Cat. No.—4328 (see "Best Buys").

Dr. Lyon's Tooth Powder (R. L. Watkins Co., NYC). 16-oz. can ranged in price from 51¢ to \$1.50; cost per oz., 3¢ to 9¢.

Labratest (Labratest, Inc.; distrib., Bloomingdale's, NYC). 16-oz. can, 44¢; cost per oz., 2¾¢; 6-oz. can, 18¢; cost per oz., 3¢.

Macy's (R. H. Macy & Co., NYC). 8-oz. can, 29¢; cost per oz., 3½¢.

Co-op (see "Best Buys").

Gimbel's (Gimbel Bros., NYC). 4 oz., 19¢; cost per oz., 5¢.

CD (saccharine) (Cooperative Distributors, NYC). 4½-oz. can, 22¢; cost per oz., 5¢.

Craig-Martin (Comfort Mfg. Co., Chicago, Ill. Sold at Woolworth's). 2-oz. can, 10¢; cost per oz., 5¢.

Sanikleen (Sanikleen Products Co., Memphis, Tenn.). 2 oz. can, 10¢; cost per oz., 5¢.

ACCEPTABLE—CONT'D

Williams (J. B. Williams Co., Glastonbury, Conn.). 2-oz. can, 10¢; cost per oz., 5¢.

Orrins (C. J. Graver & Co., Cleveland, Ohio). 16-oz. can, 89¢; cost per oz., 5½¢. 4-oz. can, 29¢; cost per oz., 7½¢.

Hearn's Blue Diamond (Hearn's, NYC). 8-oz. can, 47¢; cost per oz., 6¢.

TMC (May Dep't Stores, St. Louis, Mo.). 8-oz. can, 49¢; cost per oz., 6¢.

Briten (United Drug Co., St. Louis, Mo.). 6-oz. can, 39¢; cost per oz., 6½¢.

Pebeco (Lehn & Fink Products Corp., Bloomfield, N. J.). 3½-oz. can, 25¢; cost per oz., 7¢.

Phillips' Milk of Magnesia (Charles H. Phillips Chemical Co., NYC). 2¾-oz. can, 19¢; cost per oz., 7¢.

Rexall Pearl (United Drug Co.). 3½-oz. can, 25¢; cost per oz., 7¢.

Halesworth (Hale Bros., San Francisco). 4¼-oz. can, 2 for 65¢; cost per oz., 7½¢.

Colgate (Colgate-Palmolive-Peet, Jersey City, N. J.). 4-oz. can, 37¢; cost per oz., 9¢.

Squibb (E. R. Squibb & Sons, NYC). 2½-oz. can, 23¢; cost per oz., 9¢.

Pepsodent (Pepsodent Co., Chicago, Ill.). 4⅓-oz. can, 39¢; cost per oz., 9½¢.

Lactisal Soluble Tooth Powder (Wright & Lawrence, Inc., Chicago, Ill.). 5-oz. can, 50¢; cost per oz., 10¢. Somewhat lumpy.

Listerine (Lambert Pharmacal Co., St. Louis, Mo.). 2¼-oz. can, 23¢; cost per oz., 10¢.

Kolynos (Kolynos Co., New Haven, Conn.), 4-oz. can, 39¢; cost per oz., 10¢; 2-oz. can, 21¢; cost per oz., 10½¢.

Pro-phy-lac-tic (Pro-phy-lac-tic Brush Co., Florence, Mass.). 2¼-oz. can, 25¢; cost per oz., 11¢.

Pycopé (Pycopé, Inc., Jersey City, N. J.). 6¼-oz. can, 89¢; cost per oz., 14¢.

Detoxol (Merrell, Inc., Cincinnati, Ohio). 2.3-oz. can, 33¢; cost per oz., 14½¢.

Forhan's (Forhan's, Div. Zonite Products Corp., New Brunswick, N. J.). 10¢ size contained a little more than ½ oz. No weight stated. Cost per oz., about 18¢.

Revelation (August E. Drucker Co., San Francisco). 2⅓-oz. can, 50¢; cost per oz., 21¢. (*Continued next page*)

NOT ACCEPTABLE

(In alphabetical order)

Albodon (Wm. R. Warner & Co.). 4-oz. can, 59¢; cost per oz., 15¢. Contained sodium perborate.

Approved (Sears-Roebuck Co.). Cat. No. 5750. 3½-oz. can, 23¢; cost per oz., 6½¢. Excessively alkaline.

Calox (McKesson & Robbins, Inc.). 12-oz. can, \$1.25; cost per oz., 10½¢. Contained perborate or similar oxygen-liberating compound.

Caroid (American Ferment Co., Inc.). 2-oz. can, 48¢; cost per oz., 24¢. Excessively abrasive.

CD (salt) (Cooperative Distributors). 4½-oz. can, 22¢; cost per oz., 5¢. Excessively abrasive.

Goldblatt's Bond (Goldblatt Bros.). 2-oz. can, 2 for 19¢; 4 for 39¢; cost per oz., 5¢. Excessively abrasive.

Mi31 (United Drug Co.). 3½-oz. can, 29¢; cost per oz., 8½¢. Contained sodium perborate.

Mil-ox (American Pharmaceutical Co., Inc.). 4-oz. can, 29¢; cost per oz., 7¢. Was found to contain sodium perborate.

Orlis (Valentine Laboratories, Inc.). 3½-oz. can, 39¢; cost per oz., 11¢. Excessively abrasive. 11-oz. size contained sodium perborate.

PS (Associated Merchandising Corp.¹). 4½-oz. can, 17¢; cost per oz., 4¢. Contained perborate or similar oxygen-liberating substance.

Pyrozide (National Dental Co.). 4-oz. can, \$1; cost per oz., 25¢. Strong medicinal odor. Contained cresol.

Rexall Milk of Magnesia (United Drug Co.). 3½-oz. can, 29¢; cost per oz., 8½¢. Contained sodium perborate.

Sodium Perborate (Flavored) (Laxseed Co., Inc.). 1¾-oz. can, 10¢; cost per oz., 5½¢. Similar to **Vince** below; not to be used as a regular dentifrice.

Vince (Vince Laboratories, Inc.). 1 lb. can, \$1.69; cost per oz., 10½¢. 96% sodium perborate; not to be used as a regular dentifrice.

Walgreen's Magnesia (Walgreen Co.). 5½-oz. can, 37¢; cost per oz., 6½¢. Contained perborate or similar oxygen-liberating compound.

Zincora (Park Laboratories). 4½-oz. can, 35¢; cost per oz., 8¢. Contained perborate or similar oxygen-liberating compound.

LIQUID DENTIFRICES

ACCEPTABLE

(In order of increasing cost per fluid ounce, but note comments in text above)

Craig-Martin Full Foam (Comfort Mfg. Co., Chicago).
2-oz. bottle, 10¢; cost per oz., 5¢.

Sanikleen (Sanikleen Products Co., Memphis, Tenn.).
2-oz. bottle, 10¢; cost per oz., 5¢.

Bonded Original Liquid Dental Cream (Wm. A. Webster Co., Memphis, Tenn.). 2-oz. bottle, 12¢; cost per oz., 6¢. 4-oz. bottle, 29¢; cost per oz., 7¢.

Kleenrite (Rite Laboratories, Los Angeles). 4-oz. bottle, 19¢; cost per oz., 5¢. 2-oz. bottle, 12¢; cost per oz., 6¢.
Tended to separate on standing.

Macy's (Macy, NYC). 2-oz., 19¢; cost per oz., 9½¢.

Cue (Colgate-Palmolive-Peet, Jersey City, N. J.). 3-oz. bottle, 39¢; cost per oz., 13¢.

Pepsodent (Pepsodent Co., Chicago). 3-oz. bottle, 39¢; cost per oz., 13¢.

Teel (Procter & Gamble, Cincinnati). 3-oz. bottle, 39¢; cost per oz., 13¢.

NOT ACCEPTABLE

(In alphabetical order)

Gleem (Oxford Products, Inc.). 4-oz. bottle, 39¢; cost per oz., 10¢. 2-oz. bottle, 23¢; cost per oz., 11½¢. Contained sediment of phosphates and amorphous matter. Excessively acid.

Lyncrest (W. T. Grant). 6-oz. bottle, 23¢; cost per oz., 4¢. 2-oz. bottle, 10¢; cost per oz., 5¢. Solidified.

Vray (Weco Products Co.). 6-oz. avoirdupois bottle, 39¢; cost per oz., 6½¢. Contained 3½ fluid oz.; cost per fluid oz., 11¢. Contained starch. Separated into solid and liquid portions which are hard to mix.

DEODORANTS AND ANTI-PERSPIRANTS

Perspiration is a normal bodily function which regulates body temperature and helps eliminate wastes. In healthy persons it has practically no odor until these wastes begin to decompose. Therefore most persons can prevent perspiration odors by sufficiently frequent bathing. Some persons find it helpful to apply boric acid to areas where they perspire freely. Only if these measures are insufficient are stronger measures needed.

(Continued next page)

224 DEODORANTS

Most commercial preparations are either anti-perspirants or deodorants or a combination of the two. A few products are merely perfumes designed to mask perspiration odor.

Anti-perspirants prevent the formation of odors by stopping perspiration, but they do not destroy odors already formed. Their chief active ingredient is an astringent which closes the pores. They are not harmful when applied only to areas where perspiration is most prevalent, because perspiration increases in other parts of the body to compensate for their action.

The astringent in most of the liquid anti-perspirants tested by CU was aluminum chloride. This is the most effective and for most persons the safest anti-perspirant. Such preparations must be applied after the skin has been washed, well rinsed and thoroughly dried. They should never be used on an area within two days after hair has been removed. Since aluminum chloride rots fabrics, excess of the substance should be washed off and the skin dried thoroughly before clothes are put on. Washing off the excess will not impair the action.

Several brands tested by CU were sold in two concentrations, the weaker usually colorless and the stronger (about 1 1/3 times as strong) tinted red. The strong solution generally cost the same or at most 2¢ more than the weaker. The weaker solutions were just as effective, and stronger ones may cause dermatitis; however, one can economize by buying the stronger solution and diluting it.

Buying 15% aluminum chloride from a drugstore may be even more economical, provided its price is less per ounce than any of the "Acceptable" branded products. Fifteen percent is the maximum strength dermatologists recommend, but a weaker solution may be just as effective. Try diluting with water to the lowest effective concentration.

Those who find even a weak solution of aluminum chloride irritating may be able to use a 2% solution of formaldehyde. It can be used safely immediately after hair has been removed. Though it has an unpleasant odor, this disappears quickly. But formaldehyde too may irritate some skins. (In some places a doctor's prescription is needed to purchase formaldehyde.)

Non-Spi or any other anti-perspirant which is a yellow-

ish-brown liquid should be avoided. It contains an iron salt which tends to stain the skin.

Most cream or powder anti-perspirants contain aluminum sulfate as the active ingredient. Because the prolonged contact they require to be effective is hard on clothing, these are not satisfactory. However, a few contain other aluminum salts which are harmless to clothing.

Deodorants do not stop perspiration; they destroy odors already formed and for a limited time prevent the formation of further odors. "Best Buys" are either powdered boric acid (which may be mixed with talcum powder) or a solution of baking soda.

The principal ingredients of commercial deodorants are zinc oxide and boric acid. Salicylic acid is also included in some brands, but its continued use may irritate the skin.

From the *Reports*, May 1943.

ANTI-PERSPIRANTS

LIQUID

The active ingredient in the following is aluminum chloride, except Deodorizer which has aluminum sulphate.

(In order of increasing cost per fluid ounce. Figure in parentheses is the cost per fluid ounce)

Aluminum chloride solution 15%. A "Best Buy" if it can be purchased at a cost per fluid ounce less than any of the commercial brands. Available in drug stores.

Gimbels Liquid Deodorant (Gimbel Brothers Dep't Store, NYC). 6 fl. oz., 39¢ (6.5¢). This solution may prove too strong for some people; if so, try diluting as described in text.

Perspiration Suppressor (Cooperative Distributors, NYC). 4 fl. oz., 34¢ (8.5¢).

Macy's White Deodorant (R. H. Macy dep't store, NYC). 4 fl. oz., 44¢ (11¢).

Macy's Red Deodorant (R. H. Macy). 4 fl. oz., 46¢ (11.5¢). May be too strong; if so, dilute.

Miller's Odor-Never. 3 fl. oz., 39¢ (13¢).

Ab-Scent (Madame Berthé). 4 fl. oz., 55¢ (13.8¢). Active ingredients not stated on label.

Rexall Liquid Deodorant (United Drug Stores). 2 fl. oz., 35¢ (17.5¢).

(Continued next page)

226 ANTI-PERSPIRANTS

Tidy (Carrel Ltd.). 2½ fl. oz., 49¢ (17.8¢).

Ultra Dew. 1 fl. oz., 19¢ (19¢). May be too strong; if so, dilute.

Instant Dew. 2¼ fl. oz., 47.5¢ (21.1¢).

Deodorizer (Harriet Hubbard Ayer). 4 fl. oz., 85¢ (21.3¢).

Chex. 2 fl. oz., 49¢ (24.5¢).

Barbara Gould Anti-Perspirant. 2 fl. oz., 50¢ (25¢).

Marvelous Deodorant (Richard Hudnut). 2 fl. oz., 55¢ (27.5¢).

Perstop. ¾ fl. oz., 22¢ (29.3¢).

Nonspi. 2 fl. oz., 60¢ (30¢). Contained ferric chloride which may stain the skin.

Odo-Ro-No, Instant. 1.63 fl. oz., 60¢ (36.8¢); 0.21 fl. oz., 10¢ (47.7¢).

Odo-Ro-No, Regular. 1.63 fl. oz., 60¢ (36.8¢); 0.21 fl. oz., 10¢ (47.7¢). May prove too strong; if so, dilute.

Nedra (Elizabeth Arden). 2 fl. oz., 75¢ (37.5¢).

Ever-Dry. 1¼ fl. oz., 50¢ (40¢).

Du Barry Dainty-Dry (Richard Hudnut). 1¾ fl. oz., \$1 (57.2¢).

CREAM

The following contained aluminum salts which do not yield strong acid, hence they would not injure clothing.

(In order of increasing cost per ounce. Figure in parentheses is the cost per ounce)

Gimbels Deodorant Cream (Gimbels Brothers dep't store, NYC). 3½ oz., 29¢ (8.3¢).

Apple Blossom Deodorant Cream (Helena Rubinstein). 2 oz., 50¢ (25¢).

Nonspi Cream. 1¼ oz., 43¢ (34.3¢).

The following may injure clothing and should be well wiped off before dressing. Most contained aluminum sulphate, which, like aluminum chloride, yields strong acid and so may prove irritating if used after shaving or on pimples. Taboo, Ward's, Odo-Ro-No Ice and Fresh #2 contained aluminum chloride.

Creme Deodorant (Elizabeth Post). 0.69 oz., 10¢ (14.5¢).

Zip (Madame Berthé). 1¼ oz., 19¢ (15.2¢); ½ oz., 10¢ (20¢).

Mystic. 1.63 oz., 25¢ (15.3¢); ½ oz., 10¢ (20¢).

A&S Cream Deodorant (Abraham & Strauss dep't store, Brooklyn, N. Y.). 2 oz., 39¢ (19.5¢).

Rexall Deodorant Cream (United Drug Stores). 1½ oz., 39¢ (26¢).
Daggett & Ramsdell. 1¾ oz., 50¢ (28.6¢).
Dyspelit Cream Deodorant Cat. No.—5752 (Sears, Roebuck). 1¼ oz., 36¢ plus postage (28.8¢).
Odo-Ro-No. 1.13 oz., 39¢ (34.5¢); ¼ oz., 10¢ (40¢).
Etiquet (Lehn & Fink Products Corp.). 1 oz., 35¢ (35¢).
Tidy Arctic Cream (Carrel Ltd.). 1 oz., 35¢ (35¢).
Neet. 0.8 oz., 29¢ (36.4¢); 0.2 oz., 10¢ (50¢).
Wards Cream Deodorant Cat. No.—1372 (Montgomery Ward). 1 oz., 37¢ plus postage (37¢).
Odo-Ro-No Ice. 1 oz., 39¢ (39¢); 0.2 oz., 10¢ (50¢).
Barrington Deodorant. ¼ oz., 10¢ (40¢).
Dry Deodorant (Primrose House). 2 oz., \$1 (50¢).
Dorothy Gray Deodorant Cream. 1 oz., 50¢ (50¢).
Fresh #2. 0.87 oz., 47¢ (54¢); 0.16 oz., 10¢ (62.5¢).
Tussy. ⅜ oz., 50¢ (57¢).
Arrid. 0.64 oz., 39¢ (61¢); 0.14 oz., 10¢ (71.5¢).
Lorodo. ¾ oz., 50¢ (66.7¢).
Taboo. 2/3 oz., 52.5¢ (78.8¢).
Per-od-ex. ½ oz., 49¢ (98¢).

POWDER

Will not effectively stop perspiration. See text.
Sno-Mist. 0.4 oz., 10¢ (25¢); ¾ oz., 25¢ (33.3¢). Effective deodorant.

PADS

The following are more expensive per individual treatment than other types of anti-perspirants.

(In order of increasing cost per pad. The figure in parentheses is the price per pad)

Zip. 30 pads, 10¢ (0.33¢). Not a very effective anti-perspirant but did have deodorizing properties.
Dyspelit Cat. No.—5758 (Sears, Roebuck & Co.). 100 pads, 43¢ plus postage (0.43¢).
Wards Deodorant Pads Cat. No.—2045 (Montgomery Ward & Co.). 72 pads, 33¢ plus postage (0.46¢).
Macy's Deodorant Pads (R. H. Macy dep't store, NYC). 40 pads, 47¢ (1.2¢).
5-Day Underarm Pads. 35 pads, 49¢ (1.4¢).

DEODORANTS

LIQUID

Almay. 4 fl. oz., 50¢ (12.5¢). A suspension in alcohol.
(Continued next page)

228 ANTI-PERSPIRANTS

The following are apparently simply perfumed liquids that act as "masks."

S. O. 4 fl. oz., 39¢ (9.8¢).

Immac. 4 fl. oz., 59¢ (14.8¢); ½ fl. oz., 10¢ (20¢).

Perfumed Deodorant (Charles of the Ritz). 4 fl. oz., 95¢ (23.8¢).

Barbara Gould Rose Geranium Liquid Deodorant. 2 fl. oz., 50¢ (25¢).

CREAM

Perspiration Neutralizer (Cooperative Distributors, Inc., NYC). 2 oz., 33¢ (16.5¢).

Chex. 2½ oz., 39¢ (17.3¢).

Macy's Cream Deodorant (R. H. Macy dep't store, NYC) 2 oz., 37¢ (18.5¢).

Plexo Concentrated Cream Deodorant. 2 oz. jar, 45¢ (22.5¢); 1 oz. tube, 25¢ (25¢).

Fresh #1. 1⅓ oz., 50¢ (26.6¢).

Barbara Gould Cream Deodorant. 1.85 oz., 50¢ (27¢).

Hush. 1 oz., 29¢ (29¢); 0.31 oz., 10¢ (32.3¢).

Amolin. 1.9 oz., 55¢ (29¢); 0.19 oz., 10¢ (52.6¢).

Tidy (Carrel Ltd.). 1½ oz., 49¢ (32.7¢).

Marvelous Cream Deodorant (Richard Hudnut). 1½ oz., 55¢ (36.6¢).

Ayeristo Cream (Harriet Hubbard Ayer). 1¼ oz., 50¢ (40¢).

Yodora (McKesson and Robbins, Inc.). ¾ oz., 30¢ (40¢).

Deo (Elmo Sales Corp.). 1¼ oz., 50¢ (40¢).

Mum. 1¼ oz., 60¢ (48¢); 0.17 oz., 10¢ (58.8¢).

Miller's Odor-Never. 0.68 oz., 39¢ (57.5¢).

POWDER

Macy's Powder Deodorant (R. H. Macy dep't store, NYC). 8 oz., 39¢ (4.9¢).

Dainty Deodorant (United Drug Stores). 4 oz., 35¢ (8.8¢).

Yodora. 4 oz., 39¢ (9.8¢).

Hush. 4 oz., 54¢ (13.5¢).

Amolin. 4 oz., 58¢ (14.5¢); ½ oz., 10¢ (20¢).

***Spiro.** 2 oz., 29¢ (14.5¢).

Quest (International Cellucotton Products Co.). 2 oz., 31¢ (15.5¢).

Lenthéric Deodorant Powder. 3 oz., 50¢ (16.7¢).

Deodo (Sharp & Dohme). 2 oz., 49¢ (24.5¢).

Tidy (Carrel Ltd.). 2 oz., 49¢ (24.5¢).

Personal Sachet (Larkin Laboratories). 0.94 oz., 43¢

(45.7¢). Apparently a heavily perfumed powder. Pat-Sweet (Natone Co.). 10¢. A puff containing powder. "Spree Puff." \$1.25. A "mitten" puff containing powder; expensive.

DEPILATORIES (HAIR REMOVERS)

The only safe way to remove superfluous hair permanently is by electrolysis—destroying hair roots one by one with an electric needle. It should be done only by an expert operator and is expensive, tedious and rather painful. The single needle method involves less danger of scarring than the multiple needle method. Diathermy (high frequency current) treatment is considered less satisfactory than skillfully performed electrolysis.

Never use X-ray for removal of hair. Special "systems" for permanent hair removal may be disguised X-ray treatments; beware of them.

Hair may be removed temporarily by mechanical or chemical methods. Both can involve some danger. The easiest and safest means of temporary removal is by shaving. Contrary to popular belief, shaving does not make hair coarser or increase its rate of growth.

Such mechanical methods of depilation as tweezing (pulling hairs out one by one) or wax (using a wax covering to pull out a mass of hairs) may cause infection unless the instruments and the area to be treated are thoroughly cleansed. Rubbing off the hair with an abrasive (pumice stone or emery pads) is tedious and may irritate or infect the skin. All these methods are painful.

Most chemical depilatories contain an alkaline sulfide which dissolves the hair, but also irritates the skin. They should therefore be used with the utmost caution, and never on the armpits, face or broken skin. If they come in contact with the eyes, blindness may result. Sulfide preparations have a characteristic "rotten-egg" odor. Sulfide creams are better than the too alkaline, unstable liquid sulfides.

Thioglycolate creams are milder than the sulfides in action and odor, but they, too, should be used with extreme care.

If you use a chemical depilatory, always observe these precautions:

1. When opening or squeezing the container, hold it away from your eyes.
2. Test the depilatory on a small area of skin before

you apply it extensively. If rash or itchiness develops during the time required to remove hair, don't use the preparation.

3. If it has no ill effects, apply the depilatory in about a one-eighth inch layer, using only wood applicators. Don't allow the paste to dry on the skin; keep it moistened with water if necessary.

4. A depilatory should act in two to eight minutes. Never allow it to remain on the skin more than ten minutes.

Instead of removing hair, you can render it inconspicuous by bleaching. An ounce of fresh double-strength hydrogen peroxide (6%) plus a few drops of household ammonia makes a good bleach.

In the ratings, the types of depilatories are listed in order of quality without regard to price. *But remember that the depilatories are "Acceptable" only if used with proper precautionary measures.*

From the *Reports*, October 1941. . .

ACCEPTABLE

• THIOGLYCOLATE CREAMS

Imra (Artra Cosmetics). 65¢; cost per oz., 26¢.

Sleek (Elizabeth Arden). 60¢; cost per oz., 27¢.

Nair (Carter Products). 39¢; cost per oz., 20¢.

Wisk (Sales Affiliates). 61¢; cost per oz., 24¢.

• SULFIDE CREAMS OR PASTES.

Zip (Madame Berthé). 23¢; cost per oz., 6¢.

DeWans (Associated Distributors, Inc.). 87¢; cost per oz., 22¢.

Neet (Affiliated Products). Large size, 49¢; cost per oz., 20¢. Small size, 10¢; cost per oz., 25¢.

Del-A-Tone (The Delatone Co.). 31¢; cost per oz., 7¢. Stated net weight found to be short.

• SULFIDE POWDERS

"4711" (Ferd. Mulhens). 85¢; cost per oz., 53¢.

Del-A-Tone. 59¢; cost per oz., 59¢.

Zip. 39¢; cost per oz., 31¢.

DeWans. 52¢; cost per oz., 26¢.

Snow (Artnell Scientific Brands). 39¢; cost per oz., 8¢.

• ABRASIVES

(In order of increasing cost)

Beauty Maid Pad. 10¢ a pad.

ACCEPTABLE—CONT'D

E-Z Pad (Platinum Laboratories). 10¢ a pad.

Baby Touch Pad. 33¢ a pad.

Lechler's Velvet-Stohn. \$1 a cake. Pumice stone.

Bellin's Wonderstoen. \$1.25 a cake. Pumice stone.

• WAXES

(*In order of increasing cost per ounce*)

Facile. \$1.50 for 11-oz. jar. Cream wax.

Zip. 54¢ for 3½-oz. cake. Hard wax.

Magic (Helena Rubinstein). \$2.50 a kit. Refills available at \$1.25 for 4-oz. wax. Hard wax.

Electra (Elizabeth Arden). \$2.50 a kit. Refills available at \$2 for 5-oz. wax. Hard wax.

Dawson's (Granwell Sales Co.). 96¢ for 2-oz. jar. Cream wax.

Phelactine (Dearborn Supply Co.). 89¢ for ½-oz. stick. Hard wax.

NOT ACCEPTABLE**• LIQUID SULFIDES**

De Miracle. 51¢; cost per oz., 51¢.

Zip Lotion. Large size, 33¢; cost per oz., 17¢. Small size, 10¢; cost per oz., 20¢.

Although suitable for use with proper precaution, the following are not recommended because they contained poisonous barium salts:

• SULFIDE CREAMS OR PASTES

Evans' (George B. Evans Laboratories). 49¢; cost per oz., 9¢.

Odo-ro-no. 49¢; cost per oz., 9¢.

X-Bazin. Large size, 27¢; cost per oz., 8¢. Stated net weight found to be short. Small size, 10¢; cost per oz., 20¢.

• SULFIDE POWDERS

Tidy (Carrel Distributors). 49¢; cost per oz., 25¢.

Biff (E. Burnham Laboratories). 75¢; cost per oz., 30¢.

X-Bazin (Hall & Ruckel, Inc.). 41¢; cost per oz., 34¢.

Bonney (Bonney, Inc.). 60¢; cost per oz., 37¢.

Colonial Dames. 50¢; cost per oz., 40¢.

Evans'. 69¢; cost per oz., 61¢.

Gordon's Ex-Hair. 75¢; cost per oz., 75¢.

EYE MAKE-UP

No dye should ever be used on the eyelashes or eyebrows. Loss of sight and even death has been caused by a liquid eyelash preparation containing an aniline dye. Despite the fact that the manufacture and sale of eyelash dyes have been outlawed by the Food and Drug Act, some beauty parlors still continue to dye the lashes of patrons.

Mascara and eyebrow pencils are relatively safe, although even these may cause irritation.

Much of the mascara sold is made in a soapy base. Avoid getting it into the eyes, as unpleasant irritation will result. It is sold in cake, cream and liquid forms; the choice is mainly one of personal preference. Eyebrow pencils are usually harmless, consisting of finely divided carbon in a wax-and-mineral oil base.

FACE CREAMS

Cold cream is an emulsion of fat, solid wax or grease, liquid oil, water or rose water and a binder or emulsifier.

Cleansing creams can be divided into two general classifications—the "liquefying" type and the "cold cream" type. The "liquefying cleansing cream" is a mixture of liquid oils and high-melting fats, waxes or greases. It is solid at room temperature, but it liquefies on contact with the skin. The "cold cream" type is an emulsion of oil and water, with a high proportion of oil. In both types it is the oil that does the cleansing. The mechanical action of rubbing the creams onto the skin loosens the surface dirt—powder, dust, rouge, skin debris—which is "floated" off in the oil. The liquefying creams may leave the skin feeling greasy; the cold cream type is less likely to.

About a third of the creams tested were not stable, that is, the emulsions broke down and the oil and water components separated. Since this instability is likely to be a "batch" fault, and since another batch of the same brand may be quite stable, these brands were rated "Acceptable." Should the cream you buy separate into layers, return it in exchange for a new jar. Liquefying creams—which are compounded to liquefy at a temperature just below that of the body—will melt on a hot day but they solidify again when the weather cools off.

Twelve of the 106 creams tested were short weight by half an ounce or more.

It has been said that the higher-priced brands of cosmetics contain better perfumes. A "smell" test was conducted among a group of cold cream users to find out if price was a good indication of odor preference. In 24 of the 43 most expensive brands—costing over 20¢ an ounce—the majority of testers disliked or were indifferent to the odor. Of the 63 brands under 20¢ per oz., there were 19 brands which the majority of testers either disliked, or to which they were indifferent.

From the *Reports*, September 1943.

ACCEPTABLE

Listings are in order of increasing cost per oz.—figures in parentheses.

Dorothea Cold Cream. Montgomery Ward Cat. No.—5536. 23¢ (tax included) plus postage for 12-oz. jar (2.2¢). Jar tested was almost 2 oz. short weight; cost per oz. based on weight found. Cream separated on standing.

Dorothea Cleansing Cream. Montgomery Ward Cat. No.—5537. 23¢ (tax included) plus postage for 12-oz. jar (2.2¢). Jar tested was almost 1½ oz. short weight; cost per oz. based on weight found. Cream separated on standing.

Ansehl's Theatrical Cold Cream. Montgomery Ward Cat. No.—5527. 47¢ (tax included) plus postage for 1-lb. jar (2.9¢). Cream separated on standing.

Libby Parks Cold Cream. 25¢ for 8-oz. jar (3.1¢). Cream separated on standing. Available in 10¢ stores.

Sears Approved Theatrical Cold Cream. Sears-Roebuck Cat. No.—5734. 49¢ (tax included) plus postage for 1-lb. jar (3.1¢). Cream separated on standing. Also available in drug stores as **Lyon's Theatrical**.

Miner's Theatrical Cold Cream. 49¢ for 1-lb. jar (3.2¢). Jar tested was about ½-oz. short weight; cost per oz. based on weight found. Cream separated on standing. Available nationally.

Helene Hughes Cold Cream. 29¢ for 9¾-oz. jar (3.3¢). Jar tested was about 1 oz. short weight; cost per oz. based on weight found. Available in 10¢ stores.

Helene Hughes Cleansing Cream. 29¢ for 9¾-oz. jar (3.4¢). Jar tested was over ½-oz. short weight; cost per oz. calculated on weight found. Liquefying type. Available in 10¢ stores.

Hollywood Extra Theatrical Cleansing Cold Cream. 25¢

ACCEPTABLE—CONT'D

for 8-oz. jar (3.6¢). Jar tested was about 1 oz. short weight; cost per oz. based on weight found. Cream separated on standing. Available nationally.

Barbara Lane Cold Cream. 49¢ for 12-oz. jar (4.1¢). Cream separated on standing. Available in Whelan drug stores.

Barbara Lane All Purpose Cream. 49¢ for 12-oz. jar (4.1¢). Cream separated on standing. Available in Whelan drug stores.

Lander Cold Cream. 25¢ for 6-oz. jar (4.2¢). "With 2.03% olive oil." Available in 10¢ stores.

Consumer's Special Cold Cream. 35¢ for 8-oz. jar (4.4¢). Available nationally in department stores.

Consumer's Special Cleansing Cream. 35¢ for 7½-oz. jar (4.5¢). Liquefying type. Cream separated on standing. Available nationally in department stores.

Elizabeth Post Cold Cream. 25¢ for 5½-oz. jar (4.8¢). Available in Kress stores.

Joan Copley All Purpose Cream (Joan Copley, Dist. NYC). 10¢ for 2-oz. jar (5¢).

Lander's Overnite Cream. 10¢ for 2-oz. jar (5¢). "With turtle oil." Available in 10¢ stores.

Lander's Milk Emulsion Cleanser. 10¢ for 2-oz. jar (5¢). "Contains equivalent of 20% whole milk." Available in 10¢ stores.

Rexall Theatrical Cold Cream. 85¢ for 1-lb. jar (5.3¢). Cream separated on standing. Available in Rexall drug stores.

Gimbel's Double-Whipped Cold Cream. 79¢ for 1-lb. jar (5.8¢). Jars tested were about 2½ oz. short weight; cost per oz. based on weight found. Available in Gimbel Bros. department stores.

The Emporium Cleansing Cream. 79¢ for 13-oz. jar (6.1¢). Cream separated on standing. Available in The Emporium department store, San Francisco.

Elizabeth Post Cleansing Cream. 10¢ for 1½-oz. jar (6.7¢). Liquefying type. Available in Kress stores.

Gimbel's Liquefying Cleansing Cream. 79¢ for 1-lb. jar (6.9¢). Jars tested were about 4½-oz. short weight; cost per oz. based on weight found. Available in Gimbel Bros. department stores.

Max Factor's Theatrical Cold Cream. 50¢ for 8-oz. jar (7¢). One jar tested was about 1½-oz. short weight;

ACCEPTABLE—CONT'D

cost per oz. based on average weight of two jars. Cream separated on standing. Available nationally.

Macy's Cold Cream. 29¢ for 4-oz. jar (7.3¢); \$1.44 for 2-lb. jar (4.5¢). Available in Macy's department store, and in Macy drug outlets.

Irresistible Whip-Text Cold Cream. 10¢ for 1½-oz. jar (7.5¢). Available in 10¢ stores.

Gimbel's All-Purpose Cream. 98¢ for 1-lb. jar (7.5¢). Jars tested were 3 oz. short weight; cost per oz. based on weight found. Available in Gimbel Bros. stores.

Hampden Cold Cream. 25¢ for 3-oz. jar (8.3¢). Cream separated on standing. Available nationally.

Macy's Cleansing Cream. 34¢ for 3¾-oz. jar (9¢); 74¢ for 11-oz. jar (6.7¢). Liquefying type. Available in Macy's department store and in Macy drug outlets.

Embassy Cleansing Cream. 20¢ for 2-oz. jar (10¢). Liquefying type. Available in 10¢ stores.

CD Cold Cream. 10¢ for 1-oz. jar (10¢). Available from Cooperative Distributors, Inc., NYC or by mail order.

CD Cleansing Cream. 10¢ for 1-oz. jar (10¢). Cream separated on standing. Available from Cooperative Distributors, Inc., NYC or by mail order.

Reverie Lanolin Cleansing Cream. 10¢ for 1-oz. jar. Cream developed curdled appearance on standing. Available in 10¢ stores.

Bullock's Gold Seal Cleansing Cream. \$1.50 for 15-oz. jar (10¢). Cream separated slightly on standing. Available at Bullock's, Los Angeles.

Lady Esther Four-Purpose Face Cream. 39¢ for 3.7-oz. jar (10.5¢). Cream separated on standing. Available nationally.

Howe's Hollywood Creme Moderne. 50¢ for 4½-oz. jar (11.1¢). Available on West Coast.

Pond's Cold Cream. 39¢ for 3½-oz. jar (11.1¢). Available nationally.

Tayton's Triple Whipped Cleansing Cream. 39¢ for 3½-oz. jar (11.1¢). Available in 10¢ stores.

Blue Diamond Cold Cream. 39¢ for 4-oz. jar (11.6¢). Jars tested were more than ½-oz. short weight; cost per oz. calculated on weight found. Other sizes: 69¢ for 8-oz. jar (8.6¢); \$1.29 for 1-lb. jar (8.1¢). Cream separated on standing. Available in Hearn's Department Store, NYC.

(Continued next page)

ACCEPTABLE—CONT'D

Albolene Cleansing Cream (McKesson & Robbins, Inc.). 47¢ for 4-oz. jar (11.8¢). Available nationally.

Pond's Liquefying Cream. 39¢ for 3.2-oz. jar (12.2¢). Available nationally.

Blue Diamond All Purpose Cream. 39¢ for 4-oz. jar (12.2¢). Jars tested were about $\frac{3}{4}$ -oz. short weight; cost per oz. calculated on weight found. Other sizes: 69¢ for 8-oz. (8.6¢); \$1.29 for 1-lb. (8.1¢). Available in Hearn's department store, NYC.

Luxor Cold and Cleansing Cream. 49¢ for 4-oz. jar (12.3¢). Cream separated on standing. Available nationally.

Rexall Cold Cream. 25¢ for 2-oz. jar (12.5¢). Cream separated slightly on standing. Available in Rexall drug stores.

Ward's Cleansing Cream. Montgomery Ward Cat. No.—5310. 42¢ plus postage for $3\frac{1}{3}$ -oz. jar (12.6¢). Liquefying type.

Ward's Cold Cream. Montgomery Ward Cat. No.—5313. 42¢ plus postage for $3\frac{1}{3}$ -oz. jar (12.6¢). Cream separated slightly on standing.

Armand Cold Cream. 45¢ for $3\frac{1}{2}$ -oz. jar (12.9¢). Available nationally.

Woodbury Cold Cream. 50¢ for 3.6-oz. jar (13.9¢); 97¢ for $10\frac{1}{2}$ -oz. jar (9.2¢). Available nationally.

Jergens Face Cream. 50¢ for $3\frac{1}{2}$ -oz. jar (14.3¢); 97¢ for $10\frac{1}{2}$ -oz. jar (9.2¢). Available nationally.

L'Adonna Cold Cream. 50¢ for $3\frac{1}{2}$ -oz. jar (14.3¢). Cream separated on standing.

Tussy Pinafore Cleansing Cream. (Special size distributed by R. H. Macy & Co., Inc.). \$2 for 14-oz. jar (14.3¢). Available nationally but in different sizes.

Lanolor Cleansing Cream. (Squibb, NYC) 79¢ for $5\frac{1}{2}$ -oz. jar (14.4¢). Available nationally.

Woodbury Liquefying Cleansing Cream. 50¢ for 3.42-oz. jar (14.6¢); 97¢ for $9\frac{3}{4}$ -oz. jar (10¢). Available nationally.

Daggett & Ramsdell Perfect Cleansing Cream. 45¢ for 3-oz. jar (15¢). Available nationally.

Dioxogen Cream. 61¢ for 4-oz. jar (15.3¢). Available nationally.

Phillips' Milk of Magnesia Cleansing Cream. 60¢ for $3\frac{3}{4}$ -oz. jar (16¢). Available nationally.

ACCEPTABLE—CONT'D

House of Westmore Cleansing Cream. 50¢ for 3-oz. jar (16.6¢). Cream separated slightly on standing. Available nationally.

Cashmere Bouquet Cold Cream (Colgate-Palmolive-Peet Co.). 25¢ for 1½-oz. jar (16.7¢). Available nationally.

Max Factor Melting Cleansing Cream. \$1 for 6-oz. jar (16.7¢). Available nationally.

Max Factor Cleansing Cream. 55¢ for 3½-oz. jar (17.6¢). Available nationally.

Vivian Trent Rich Cleansing Cream. \$1 for 5½-oz. jar (18.2¢). Cream separated on standing. Available at The May Dept. Store, St. Louis.

Edna Wallace Hopper's Cleansing Cream. 49¢ for 2.6-oz. jar (18.9¢). Available nationally.

Angelus Cold Creme. 49¢ for 2½-oz. jar (19.6¢). Available nationally.

Elmo Cleansing Cream. \$1.10 for 4¾-oz. jar (23.2¢). Available nationally.

Marvelous Cold Cream (Richard Hudnut). 55¢ for 2½-oz. jar (24.5¢). Cream separated on standing. Available nationally.

Colonial Dames All Purpose Cream. \$2 for 8-oz. jar (25¢). Cream separated on standing. Available nationally.

Dorothy Gray Salon Cold Cream. \$1 for 4-oz. jar (25¢). Cream separated on standing. Available nationally.

Mary Scott Rowland Cold Cream. \$1 for 4-oz. jar (25¢). Cream separated on standing. Available at Whelan drug stores.

Coty Cleansing Cream. \$1 for 4-oz. jar (25¢). Available nationally.

Du Barry Cleansing Cream (Richard Hudnut). \$1 for 4-oz. jar (25¢); \$3.50. for 1-lb. jar (21.9¢). Available nationally.

Drezma Cleansing Cream. \$1 for 4-oz. jar (25¢). Liquefying type. Available nationally.

CD Complexion Cream. \$1 for 4-oz. jar (25¢). Available from Cooperative Distributors, NYC or by mail order.

Vida-Ray Cream (distributed by Vita-Ray). \$1.85 for 8-oz. jar (25.6¢); \$3 for 1-lb. jar (18.8¢). Eight-ounce jars tested were about ¾-oz. short weight; cost per oz. based on weight found. Cream separated on standing. Available nationally.

(Continued next page)

ACCEPTABLE—CONT'D

Helena Rubinstein's Water Lily Cleansing Cream. \$1 for 3-4/5-oz. jar (26.3¢); \$3.75 for 15½-oz. jar (24.2¢). Available nationally.

Yardley Night Cream (Yardley, NYC). \$1 for 3.8-oz. jar (26.3¢). Available nationally.

Ingram's Improved Cream (Bristol-Myers Co.). \$1 for 3¾-oz. jar (26.7¢). Available nationally.

Primrose House Chiffon Cream. \$1.17 for 4.4-oz. jar (26.6¢); \$2.24 for 10-oz. jar (22.4¢). Cream separated on standing. Available nationally.

Primrose House Roseleaf Cleansing Cream. \$1.17 for 4.4-oz. jar (26.6¢); \$3.50 for 1-lb. jar (21.9¢). Liquefying type. Available nationally.

Du Barry Special Cleansing Cream (Richard Hudnut). \$1 for 3¾-oz. jar (26.7¢); \$3.50 for 1-lb. jar (21.9¢). Liquefying type. Available nationally.

Dorothy Gray Cleansing Cream (Liquefying). \$1 for 3¾-oz. jar (26.7¢); \$3.50 for 1-lb. jar (21.9¢). Available nationally.

Cara Nome Skin Cream. \$1 for 3½-oz. jar (28.6¢). Available nationally.

Quinlan Special Formula Cleansing Cream. \$1 for 3½-oz. jar (28.6¢); \$3 for 15-oz. jar (20¢). Available nationally.

Quinlan Cleansing Cream. \$1 for 3½-oz. jar (28.6¢); \$3 for 1-lb. jar (21.9¢). Available nationally.

Frances Denney Cleansing Cream. \$1.17 for 4-oz. jar (29.3¢); \$2 for 8-oz. jar (25¢). Liquefying type. Available nationally.

Beauty Counselor Cleansing Formula (Beauty Counselors Inc., Grosse Pointe, Mich.). \$1 for 3⅔-oz. jar (29.7¢) plus postage. Available by mail order.

Constance Bennett Cleansing Cream. \$1 for 4-oz. jar (30¢); sells in 10¢ stores for 39¢. Jars tested were almost 1-oz. short weight; cost per oz. based on weight found. Separated on standing. Available nationally.

Frances Denney Mild Cleansing Cream. \$1.05 for 3½-oz. jar (30¢); \$2.34 for 10-oz. jar (23.4¢). Available nationally.

America Cleansing Cream. \$1 for 3⅓-oz. jar (30¢). Available from Marshall Field & Co., Chicago.

Almay Cold Cream. \$1.10 for 3½-oz. jar (31.4¢). Available nationally.

ACCEPTABLE—CONT'D

Three Flowers Cleansing Cold Cream (Richard Hudnut). 55¢ for 1½-oz. jar (31.4¢). Available nationally.

Harriet Hubbard Ayer's Luxuria. \$1 for 3½-oz. jar (32¢). Available nationally.

Care Nome Cold Cream (Langlois, Inc.). \$1 for 3-oz. jar (33.3¢). Available nationally in chain drug stores.

Leon Laraine Cold Cream, Cleansing. \$1 for 3-oz. jar (33.3¢). Cream separated on standing. Available in Walgreen drug stores.

Almay Liquefying Cream. \$1.10 for 3¼-oz. jar (33.8¢). Available nationally.

Barbara Gould Special Cleansing Cream. \$1 for 2¾-oz. jar (36.4¢); \$3.50 for 15-oz. jar (23.3¢). Available nationally.

Barbara Gould Cream Pompon. \$1 for 2¾-oz. jar (36.4¢); \$3.50 for 15-oz. jar (23.3¢). Available nationally.

Princess Pat Patrician Cream. \$1.50 for 4-oz. jar (37.5¢); \$4 for 11.12-oz. jar (35.9¢). Available nationally.

Fay's Lubricating Cleansing Cream. 75¢ for 2-oz. jar (37.5¢); \$2.50 for 8-oz. jar (31.3¢). Available nationally.

Rose Laird Solo Cream. 94¢ for 2½-oz. jar (37.6¢); \$3.89 for 1-lb. jar (24.3¢). Available in department stores.

Rose Laird Cleansing Oil (Rose Laird). 69¢ for 1¼-oz. jar (39.5¢). Liquefying type. Available in department stores.

Daggett & Ramsdell Golden Cleansing Cream. \$1.30 for 3-oz. jar (43.3¢). Cream separated on standing. Available nationally.

Charles of the Ritz Normal Skin Cleanser. \$1.25 for 2.86-oz. jar (43.7¢); \$3.75 for 11.44-oz. jar (32.8¢). Available nationally.

Americie Rich Emollient Cream. \$1.75 for 3-3/5-oz. jar (46¢). Cream separated on standing. Available from Marshall Field, Chicago.

Jacqueline Cochran Cleansing Cream. \$1 for 2-oz. jar (50¢); \$3.25 for 8-oz. jar (40.7¢). Available nationally.

Ardena Fluffy Cleansing Cream. \$1 for 1¾-oz. jar (57.3¢); \$6 for 1-lb., 3-oz. jar (31.6¢). Available nationally.

Ardena Cleansing Cream. \$1 for 1½-oz. jar (61.5¢). Liquefying type. Available nationally.

FACE POWDER

Face powder is intended to remove shine from the face, cover minor blemishes, lend a flattering tint to the complexion, and give off a faint but pleasing perfume. It must be easy to apply uniformly (i.e., the powder must have "slip"), the color must be blended well, the powder must adhere to the skin, and must have good covering power.

Some changes have been made in face powder formulas, because a few of the usual ingredients are strategic war materials. But chances are that the change will hardly be noticed; CU has tested a number of face powders with widely differing formulas, and noted little difference in performance.

Powders containing starch are "Not Acceptable." Starch forms a sticky paste when wet, which may serve as a breeding ground for bacteria; it clings to hair and may make downy hair visible; it tends to dry the skin; and some persons are allergic to it.

It's good business to check the weights of different sizes when you buy face powder. The government requires the weight to be stated on the label. CU found many brands where one size cost much less than another (sometimes the smaller size was the cheaper).

Wherever possible, Rachel was the color tested, but there is no uniformity among manufacturers in naming shades. Experiment can determine your best shade.

Samples were examined for adherence and covering power, presence of sharp particles (which may irritate the skin), presence of starch and distribution of coloring matter. The ratings also include the opinion of CU's consultants on the perfume quality. The "Acceptable" powders are listed in order of increasing cost, since differences in quality were slight. The 10% Federal Excise Tax is not included in cost per box (unless otherwise noted) or in cost per ounce in the ratings.

From the *Reports*, October 1942.

ACCEPTABLE

(In order of increasing cost per ounce. Where cost per ounce differs for two sizes of the same brand, the lower price determines the brand's position in the ratings. Those at the top of the list are "Best Buys.")

Irresistible. "Rachel." 1½ oz. box, 10¢; cost per oz., 7¢.

Fair quality and perfume. Available nationally in 10¢ stores.

ACCEPTABLE—CONT'D

Elizabeth Post. "Rachel." 1½ oz. box, 10¢; cost per oz., 8¢. Fair quality and perfume. Available nationally in Kress stores.

Outdoor Girl. Available nationally. (Affiliated Products, Inc., Jersey City). "Palm Beach-Rachelle." 1-1/6 oz. box, 10¢; cost per oz., 9¢. "Deep Rachelle." Approx. 2.5 oz. box, 25¢; cost per oz., 10¢. Good quality and perfume for "Palm Beach-Rachelle," but sharp particles were present. Fair quality for "Deep Rachelle."

Embassy. Available nationally in 10¢ stores. (Embassy Ltd., NYC). "Rachelle." 1⅓ oz. box, 20¢; cost per oz., 11¢. Relatively low quality; good perfume.

Elizabeth Kent. Available nationally in 10¢ stores. (Elizabeth Kent, Inc., NYC). "Rachel." 7/8 oz. box, 10¢; cost per oz., 11¢. Fair quality and perfume.

Ward's (Montgomery Ward). "Rachel 1." Cat. No. 1360: 3 oz. box, 42¢; cost per oz., 14¢; Cat. No. 1650: 2/3 oz. box, 11¢; cost per oz., 17¢. Fair quality; poor perfume. Available by mail order.

Cashmere Bouquet. "Rachel No. 1." 1½ oz. box, 25¢; cost per oz., 14¢. 1½ oz. box, 10¢; cost per oz., 14¢. Good quality and perfume. Available nationally.

CD (Cooperative Distributors, NYC). "Rachel No. 2." 3 oz. box, 45¢; cost per oz., 15¢. Good quality; poor perfume. Available in NYC or by mail order.

House of Westmore. "Rachelle." 2¾ oz. box, 50¢; cost per oz., 18¢; 1½ oz. box, 25¢; cost per oz., 20¢. Good quality; fair perfume. Available nationally.

Hampden. "Rachelle." 2¾ oz. box, 52¢; cost per oz., 19¢; "Eggshell." 0.45 oz. box, 10¢; cost per oz., 22¢. Relatively low quality; poor perfume.

Three Flowers (Richard Hudnut). "Brunette (Rachel No. 1)." 4 oz. box, 75¢; cost per oz., 19¢. Good quality; fair perfume.

Armand. "Brunette." Approx. 2½ oz. box, 50¢; cost per oz., 20¢. Fair quality and perfume.

L'Adonna. "Rachel." 2½ oz. box, 50¢; cost per oz., 20¢. Fair quality and perfume.

Lady Esther. "Rachel." 2-7/10 oz. box, 55¢; cost per oz., 20¢. 1/3 oz. box, 10¢; cost per oz., 30¢. Good quality; fair perfume.

Mary Scott Rowland. "Mayfair." Approx. 1.27 oz. box, 25¢; cost per oz., 20¢. "Coventry." Approx. 3.53 oz.

ACCEPTABLE—CONT'D

box, 75¢; cost per oz., 21¢. Fair quality; poor perfume. "Mayfair" had many particles with sharp edges; color of "Coventry" was poorly distributed.

Edna Wallace Hopper's. "Rachel." $\frac{1}{2}$ oz. box, 10¢; cost per oz., 20¢. Fair quality and perfume. Not to be confused with *Edna Wallace Hopper's* "Super-cling" which contained starch.

Woodbury. "Rachel." $\frac{1}{2}$ oz. box, 10¢; cost per oz., 20¢. $\frac{1}{2}$ oz. box, 50¢; cost per oz., 20¢. Good quality; fair perfume.

Colonial Dames. "Rachel." $4\frac{1}{2}$ oz. box, \$1.00; cost per oz., 22¢. Good quality; fair perfume.

Java (Bourjois). "Rachel." $2\frac{3}{4}$ oz. box, 60¢; cost per oz., 22¢. Fair quality and perfume.

Luxor. "Ivory Rachel." $2\frac{1}{4}$ oz. box, 49¢; cost per oz., 22¢. Fair quality and perfume.

Marvelous (Richard Hudnut). "Rachel No. 1." $2\frac{1}{2}$ oz. box, 55¢; cost per oz., 22¢. $1\frac{1}{3}$ oz. box, 10¢; cost per oz., 30¢. Fair quality and perfume.

Park & Tilford. "Light Rachel." 0.42 oz. box, 10¢; cost per oz., 24¢. Fair quality and perfume.

Tayton's. "Rachel." 0.42 oz. box, 10¢; cost per oz., 24¢. Good quality; poor perfume.

Lady Marlow. "Rachelle No. 1." 3 oz. box, 79¢; cost per oz., 26¢. Good quality; fair perfume.

Princess Pat. "Rose Cameo." 0.38 oz. box, 10¢; cost per oz., 26¢. "Flesh." Approx. 3 oz. box, \$1.00; cost per oz., 33¢. Good quality; poor perfume. "Flesh" had many sharp edged particles.

Pond's. "Rachel." 2.1 oz. box, 55¢; cost per oz., 26¢. 0.35 oz. box, 10¢; cost per oz., 29¢. Good quality; fair perfume.

Jergen's. "Rachel." $3\frac{1}{4}$ oz. box, \$1.00; cost per oz., 27¢. $1\frac{1}{3}$ oz. box, 10¢; cost per oz., 30¢. Good quality; fair perfume.

Gemey (Richard Hudnut). "Brunette (Rachel No. 1)." $3\frac{1}{4}$ oz. box, \$1.00; cost per oz., 27¢. Good quality and perfume.

Max Factor's. "Rachelle." 105 gram (3.74 oz.) box, \$1.00; cost per oz., 27¢. "Natural." 0.24 oz., 10¢; cost per oz., 42¢. Good quality and perfume.

April Showers. "Rachel." 2 oz. box, 55¢; cost per oz., 28¢. $1\frac{1}{3}$ oz. box, 10¢; cost per oz., 30¢. Good quality; fair

ACCEPTABLE—CONT'D

perfume. The color was poorly distributed.

Chiffon. "Natural." 0.35 oz. box, 10¢; cost per oz., 29¢.
"Beige." 2.82 oz. box, \$1.00; cost per oz., 35¢. Fair quality and perfume.

Louise Andre (Associated Merchandising Corp.,¹ NYC). "Dresden (Rachel No. 1)." 3-1/3 oz. box, \$1.00; cost per oz., 30¢. Good quality; fair perfume.

Luxuria (Harriet Hubbard Ayer, NYC). "Rachel." 3.58 oz. box, \$1.10; cost per oz., 31¢. Fair quality and perfume.

Marcelle. "Rose Rachelle." 1 3/4 oz. box, 55¢; cost per oz., 31¢. Good quality; fair perfume.

Pompeian. "Rachel No. 1." 1 3/4 oz. box, 55¢; cost per oz., 31¢. Good quality; fair perfume.

Don Juan. "Rachel 1." 1/3 oz. box, 10¢; cost per oz., 30¢. Good quality and perfume.

Leon Laraine. "Rachel No. 2." 3 oz. box, \$1.00; cost per oz., 33¢. Good quality and perfume.

Mello-Glo. "Rachel." 0.3 oz. box, 10¢; cost per oz., 33¢. Good quality; poor perfume.

Ralo (Elmo Sales Corp.). "Brunette." 3 oz. box, \$1.00; cost per oz., 33¢. Good quality; fair perfume.

Tangee. "Rachel." 3 oz. box, \$1.00; cost per oz., 33¢. 0.27 oz. box, 10¢; cost per oz., 37¢. Good quality; poor perfume.

Harriet Hubbard Ayer. "French Rachel." 1.59 oz. box, 55¢; cost per oz., 35¢. Comparatively low quality; poor perfume. Many sharp particles.

Louis Phillippe. "414 Rachelle No. 1." 2 3/4 oz. box, 97¢; cost per oz., 35¢. Good quality; fair perfume.

Daggett and Ramsdell. "Rachel." 2 3/4 oz. box, \$1.00; cost per oz., 36¢; 0.28 oz. box, 10¢; cost per oz., 36¢. Good quality; fair perfume.

Drezma. "Deep Rachael." 0.28 oz. box, 10¢, cost per oz., 36¢. "Champagne Beige." 1 oz. box, \$1.00; cost per oz., \$1.00. Fair quality; good quality perfume.

Coty. "L'Origan Rachel No. 1." 2.64 oz. box, \$1.00; cost per oz., 38¢; 1/5 oz. box, 10¢; cost per oz., 50¢. Good quality and perfume.

Americie (Marshall Field & Co., Chicago). "Rachel." 2 1/2 oz. box, \$1.00; cost per oz., 40¢. Good quality; fair perfume.

Early American Old Spice. "Honeycomb." 2 1/2 oz. box,

¹ For a list of AMC stores, see page 10.

ACCEPTABLE—CONT'D

\$1.00; cost per oz., 40¢. Good quality; fair perfume.

Nosegay (Dorothy Gray). "Glo-Rachel." 5 oz. box, \$2.00; cost per oz., 40¢. Good quality and perfume.

Skylark (Barbara Gould). "Rose Indian." 2½ oz. box, \$1.00; cost per oz., 40¢. Good quality; fair perfume.

Barbara Gould. "Rachel No. 1." Approx. 2.35 oz. box, \$1.00; cost per oz., 43¢. Comparatively low quality; poor perfume. Sharp particles present.

Evening in Paris (Bourjois). "Rachel." 0.23 oz. box, 10¢; cost per oz., 44¢. Approx. 2 oz. box, \$1.00; cost per oz., 50¢. Good quality; fair perfume.

Almay. "Light Rachel." 2¼ oz. box, \$1.10; cost per oz., 49¢. Good quality; fair perfume.

Yardley. "Deep Rachel." 2¼ oz. box, \$1.10; cost per oz., 49¢. Good quality; fair perfume.

Fay's Alluring. "Rachelle Special." ½ oz. box, 25¢; cost per oz., 50¢. Good quality; poor perfume.

Helena Rubinstein. "Peachbloom." 2 oz. box, \$1.00; cost per oz., 50¢. Fair quality; good perfume.

Tweed (Letheric). "Rachel." 2 oz. box, \$1.00; cost per oz., 50¢. Good quality and perfume.

Houbigant. "Rachel No. 1." 1 oz. box, 55¢; cost per oz., 55¢. Fair quality; good perfume. Many sharp particles present.

Duvetyn (Lucien Lelong). "Rachel Fonce Aureate 'B'." Approx. 1.95 oz. box, \$1.50; cost per oz., 77¢. Good quality; fair perfume.

Charles of the Ritz. (Color not stated.) 1 oz. box, \$1.00; cost per oz., \$1.00. Good quality and perfume.

Jacqueline Cochran. "Naturel." 2 oz. box, \$1.75; cost per oz., 88¢. Good quality and perfume. Many sharp particles.

Guerlain. "Shalimar Rachel." 1½ oz. box, \$1.50; cost per oz., \$1.00. Fair quality and perfume.

NOT ACCEPTABLE

The following were "Not Acceptable" because they were found to contain starch. See comment in text.

Adrienne. "Rachelle Olive." 3¼ oz. box, 35¢; cost per oz., 17¢.

Ann Barton (Sears-Roebuck & Co.). "Ivory Satin Rachelle No. 1." Cat. No.—900. 3 oz. box., 39¢¹; cost per oz., 13¢.

¹ 10% Federal Excise Tax included

NOT ACCEPTABLE—CONT'D

Betty Lou Gardenia. "Brunette." 2/3 oz. box, 10¢; cost per oz., 15¢.

Cara Nome. "Light Rachelle." ½ oz. box, 25¢; cost per oz., 50¢; 1¼ oz. box, \$1.00; cost per oz., 57¢.

Djer-Kiss. "Naturelle." 1½ oz. box, 50¢; cost per oz., 31¢.

Edna Wallace Hopper's Super-cling. "Rachel." 2½ oz. box, 65¢; cost per oz., 26¢. (Not to be confused with *Edna Wallace Hopper's* ½ oz. box, listed as "Acceptable," which did not contain starch.)

Elizabeth Arden. "Rachel." 2½ oz. box., \$1.75; cost per oz., 60¢. Many sharp particles present.

Macy's. "Cinnamon." ½ oz. box, 9¢; cost per oz., 18¢.
"Rachel." 4 oz. box, 74¢; cost per oz., 19¢.

Poudre de Riz (Roger & Gallet). (Color not stated.) 3 oz. box, 35¢; cost per oz., 12¢.

Prince Matchabelli. "Light Rachel." 4½ oz. box, \$1.50; cost per oz., 33¢.

Vita Ray. "Mirage Medium Rachel." 3½ oz. box, \$1.00; cost per oz., 29¢.

HAIR DYES

Unfortunately, none of the really effective hair dyes is completely safe, and the safe ones are not completely effective. If a hair dye must be used, the "amine" preparations are most satisfactory, *provided a skin (patch) test has been applied two days before each application, to see whether the individual is or has become sensitive to the dye.* Insist on a fresh package; amine dyes are unstable, especially when exposed to air.

No dye can restore the *natural* color to hair which has become gray. Products advertised to do this usually impart the same color to all hair.

Bleaches produce various blond shades by removing color from hair. Their continued use may make the hair dry and brittle.

HAIR SHAMPOOS

The function of a shampoo is to clean the hair and scalp effectively, economically and safely. Anything else it claims to do is irrelevant; don't pay premium prices for worthless claims or ingredients.

(Continued next page)

Avoid bleaching, dyeing and solvent shampoos. If your scalp is dry, stay away from those containing alcohol. If you have a tendency towards oiliness, you may find Tincture of Green Soap, USP, which contains alcohol helpful.

Either soap shampoos or the newer soapless type are available. A cake of mild toilet soap will do the job just as effectively, but not so conveniently.

Dry soap content and type of soap present determine the cleansing action of a soap shampoo. It should be made from non-rancid oils and contain no free acid or alkali or impurities. It should be clear and preferably uncolored. If one brand irritates your scalp, switch to another type of soap.

There are two types of soapless shampoos: Sulfated alcohols (lathering) and sulfonated oils (non-lathering). Soapless shampoos can be used under neutral or slightly acid conditions, an advantage for the comparatively few people who cannot tolerate even mild alkalinity. Sulfated alcohols are the highest priced shampoos, but they are the best cleansers, and eliminate defects of soap (alkalinity, curd, etc.). However, they may be too drying for some persons. Sulfonated oils are particularly useful for people with dry scalps. Their cost and cleansing action is about equal to that of soap shampoos.

CU rated 31 brands of soap type and 9 brands of soapless shampoos. Ratings were based on laboratory tests for percent dry content, cleansing action and alkalinity.

From the *Reports*, March 1942.

SOAP SHAMPOOS

BEST BUYS

The following shampoos of the "Acceptable" list were judged to offer the best value for the money.

Wildroot Instant. Large size, 43¢; cost per fl. oz., 7.2¢. Small size, 10¢; cost per fl. oz., 10¢. Contained 15% alcohol. Should not be confused with other types of shampoos marketed by same company. Available nationally.

CD Castile (Cooperative Distributors, NYC). 26¢; cost per fl. oz., 3.3¢. Available in NYC or by mail order.

Macy's Castile (R. H. Macy & Co., NYC). 46¢; cost per fl. oz., 2.9¢. Available at Macy's department store, NYC.

ACCEPTABLE*(In order of quality without regard to price)***Wildroot Instant** (see "Best Buys").**Harriet Hubbard Ayer.** 85¢; cost per fl. oz., 21.3¢. Available nationally.**Silque.** 49¢; cost per fl. oz., 8.2¢. Available at United Drug Stores.**Barbara Gould** (Barbara Gould, NYC). 50¢; cost per fl. oz., 11.8¢. Available nationally.**Daggett & Ramsdell.** 60¢; cost per fl. oz., 10.9¢. Available nationally.**Barbara Lane Castile.** 39¢; cost per fl. oz., 4.9¢. Available at Whelan Drug stores.**Klenzo Cocoanut Oil** (United Drug Co.). 50¢; cost per fl. oz., 8.3¢. Available at United Drug Stores.**Marchand's Castile** (Chas. Marchand Co., NYC). Large size, 29¢; cost per fl. oz., 7.3¢. Small size, 10¢; cost per fl. oz., 10¢. Available nationally.**CD Castile** (see "Best Buys").**Mary Scott Rowland Castile.** 50¢; cost per fl. oz., 8.2¢.**Laco Castile.** Large size, 29¢; cost per fl. oz., 5.8¢. Small size, 10¢; cost per fl. oz. 10¢.**Conti Castile.** Large size, 37¢; cost per fl. oz., 7.4¢. Small size, 10¢; cost per fl. oz., 10¢.**Macy's Castile** (see "Best Buys").**Macy's Olive and Cocoanut.** 29¢; cost per fl. oz., 3.6¢. Available at Macy's department store, NYC.**Packer's with pine tar.** 10¢; cost per fl. oz., 10¢. Contained 10% alcohol.**Hennafoam Coconut.** Large size, 39¢; cost per fl. oz., 6.5¢. Small size, 10¢; cost per fl. oz., 10¢.**Mulsified Cocoanut.** Large size, 25¢; cost per fl. oz., 12.5¢. Small size, 10¢; cost per fl. oz., 13.3¢.**Palmolive.** Large size, 25¢; cost per fl. oz., 6.3¢. Small size, 10¢; cost per fl. oz., 6.7¢.**Van Ess.** 49¢; cost per fl. oz., 12.3¢.**Bartell Lemon.** 33¢; cost per fl. oz., 4.1¢. Contained 15% alcohol.**Kreml.** 39¢; cost per fl. oz., 6.5¢.**Packer's with olive oil.** 10¢; cost per fl. oz., 10¢.**Woodbury Castile.** Large size, 25¢; cost per fl. oz., 4.6¢. Small size, 10¢; cost per fl. oz., 10¢.**Vantine's Vitamin D Olive.** 29¢; cost per fl. oz., 7.3¢.

ACCEPTABLE—CONT'D

Cas-O-Lan. Distributed by Montgomery Ward as Cat. No.—6652. 39¢; cost per fl. oz., 6.5¢.

Lyncrest (W. T. Grant Stores). 10¢; cost per fl. oz., 2.5¢.

Carson's Castile. 49¢; cost per fl. oz., 3.1¢.

Lady Hildé Cocoanut. 59¢; cost per fl. oz., 2.3¢.

NOT ACCEPTABLE

Fitch's Dandruff Remover. 10¢; cost per fl. oz., 10¢. Contained 49.5% alcohol.

Lucky Tiger Magic. 33¢; cost per fl. oz., 4.1¢. Contained 47% alcohol.

Walter's Dandruff Remover Cat. No.—5753 (Sears-Roe-buck). 39¢; cost per fl. oz., 4.9¢. Contained 46% alcohol.

SOAPLESS SHAMPOOS**ACCEPTABLE**

(*In approximate order of quality without regard to price*)

• SULFATED ALCOHOLS (LATHERING)

Drene. Small size, 10¢; cost per fl. oz., 20¢. Large size, 49¢; cost per fl. oz., 16.3¢.

Drene Special. Small size, 10¢; cost per fl. oz., 20¢. Large size, 49¢; cost per fl. oz., 16.3¢. Claimed to be preferable for dry hair.

Valene. 49¢; cost per fl. oz., 16.3¢.

Halo. Large size, 49¢; cost per fl. oz., 14¢. Small size, 10¢; cost per fl. oz., 16¢.

• SULFONATED OILS (NON-LATHERING)

Venida Oil. 47¢; cost per fl. oz., 5.9¢. Mislabeled.

Lustertone. 45¢; cost per fl. oz., 7.5¢.

CD Latherless (Cooperative Distributors, NYC). 27¢; cost per fl. oz., 6.8¢.

Mar-O-Oil. 49¢; cost per fl. oz., 8.2¢.

Admiracion. 39¢; cost per fl. oz., 9.8¢.

HAND CLEANERS

Seven brands of paste and four brands of powdered hand cleaners were tested for percentage of soap, builder, abrasive and moisture; and for fineness of abrasive and alkalinity.

Some kinds of dirt require use of a coarser abrasive than others, but since coarser abrasives are hard on the skin, try to manage with one of the hand cleaners containing a fine abrasive.

From the *Reports*, March 1943.

ACCEPTABLE

(*In approximate order of size of abrasive, finest first*)

Boraxo (Pacific Coast Borax Co., Los Angeles). 15¢ for 8 oz.; cost per dry oz., 2.5¢. A simple mixture of soap and borax with no insoluble abrasive. An effective cleaner but quite expensive.

Colgate's Mechanics Soap Paste (Colgate-Palmolive-Peet Co., Jersey City, N. J.). 15¢ for 10½ oz.; cost per dry oz., 2.3¢. Had twice as much soap and less abrasive than any of the other paste cleaners tested.

Gre-Solvent (The Utility Co., Inc., NYC). 33¢ for 3 lbs.; cost per dry oz., 1.2¢. Paste cleaner.

White Sail (The Great Atlantic and Pacific Tea Co., NYC). 20¢ for 3 lbs.; cost per dry oz., 0.8¢. Paste cleaner.

Mobo Powdered Hand Cleaner (John J. Stanley Co., Inc., NYC). 25¢ for 16 oz.; cost per dry oz., 1.7¢.

Gre-Solvent Powdered (The Utility Co., Inc.). 14¢ for 13 oz.; cost per dry oz., 1.1¢.

Mione Soap (Mione Mfg. Co., Collingdale, Pa.). 25¢ for 3 lbs.; cost per dry oz., 0.9¢. Paste cleaner.

Spic'N'Span (Endurance Products Co., NYC). 19¢ for 4 lbs.; cost per dry oz., 0.3¢. Had half as much soap and more abrasive than any other paste cleaners tested. Composition accounts for low price.

Dif Hand Cleaner (Dif Corp., Garwood, N. J.). 15¢ for 10 oz.; cost per dry oz., 1.5¢. A powder cleaner.

Tops (Tops Mfg. Co., Bogota, N. J.). 17¢ for 4 lbs.; cost per dry oz., 0.5¢. Had less soap and more abrasive than any other paste cleaner tested except *Spic'N'Span*.

Mobo Hand Cleanser (John J. Stanley Co., Inc.). 45¢ for 3 lbs.; cost per dry oz., 1.4¢. Paste cleaner.

HAND LOTIONS

The most effective softening agent for the hands is lanolin, which can be conveniently purchased in drug stores in the form of toilet lanolin. In this form it does not have the objectionable odor or consistency of ordinary "anhydrous" lanolin. The latter is somewhat cheaper, however, and just as effective, but make sure the hands are wet before application; otherwise the anhydrous lanolin removes moisture from them. A vege-

250 HAND LOTIONS, LEG COSMETICS

table oil, such as olive oil, or cold cream also is beneficial.

Most proprietary hand lotions are more expensive than these substances, and less effective.

Protective Creams, designed to make the hands easy to clean, are growing in popularity. They are applied before the hands get dirty, forming a protective layer which holds the dirt and makes it easier to wash off.

A cream with a petrolatum base is used by workers whose hands are kept in water a great deal. For dry work there is a type of protective cream containing lanolin or cholesterol. But most popular are the creams which have a vanishing cream base, carrying a soft, harmless substance that fills the pores and prevents dirt from entering. One such cream is Du Pont's *Pro-Tek*, but you can probably find less expensive brands in your local stores.

Protective creams are most effective where the work is not too heavy and where hand manipulation is limited. They also serve a useful purpose when applied to the face and upper arms, which accumulate dirt even though they do not come into direct contact with the work. Here the dirt remains on the surface, and the protective cream, together with the dirt, is easy to remove with toilet soap. For extremely dirty or very active work, it is usually necessary to use a special hand cleaner in addition to the cream (see "Hand Cleaners," page 248).

LEG COSMETICS

For summer wear, leg cosmetics can save the price of many pairs of stockings and, when properly applied, good ones can give the illusion of stocking legs.

Application: Legs should be smooth and free of hair or stubble. (See Depilatories, p. 229). Application takes from 3 to 15 minutes. The best method is to use quick sweeping strokes from foot to knee with the palm of the hand; fingers, finger tips, cotton, puff or rubber pad may also be used. Experiment to find the best method of application and the proper amount to use.

After the makeup is dry, buffing with the hands or with soft tissue will usually remove any excess powder and give the legs a sheen.

Types: There are several types:

Lotions, the most popular, are easiest to apply and generally give good results. They have a powder mixture suspended in a liquid medium; additional ingredients

act as a binder and give luster and sticking power after the liquid has evaporated. In some the powder remains suspended; in others it settles out.

Creams require more time and are more difficult to apply evenly and smoothly. They come in sticks, tubes and jars. Some have a wax or grease base which is waterproof but tends to rub off on hems of dresses. Others, applied with cotton or a moist sponge, may not rub off when dry but are not waterproof.

CU found the tints the least satisfactory. They merely color the legs to the appearance of sun tan. Drops of water dissolve the dye, leaving the legs streaky.

CU technicians used a panel of seven testers to try the 71 brands rated below. At least two, and generally three or four, tested each product. The makeup was applied in the morning and worn all day under the usual working conditions. Ease and time of application were noted, also appearance and tendency to rub off onto hems of skirts. Resistance to water spotting or streaking was tested by sprinkling water on the legs.

From the Reports, July 1943.

All ratings are in order of increasing cost within each group. All these products are subject to a Federal Tax. Approximate cost per use is indicated by the figures in parentheses.

LOTIONS & CREAMS

EXCELLENT

The following did not streak, had good covering power, did not rub off and were water-resistant.

Elizabeth Kent Stocking Make-up. 25¢ for 4 oz. (1¢). Nationally available in 5 & 10¢ stores (but not Woolworth or Kresge).

Westmore's Leg Make-Up. 25¢ for 3 oz. (1½¢). Nationally available in 5 & 10¢ stores.

Sutton Leg Color. 59¢ for 6 oz. (1½¢). Nationally available.

Tussy Show-Off (Lehn & Fink). 75¢ for 8 oz. (1½¢). Nationally available.

Tint-On Hose. 49¢ for 4 oz. (2¢). Purchased in Chicago. Delettrez. \$1 for 6 oz. (3¢). Available in large cities.

Daggett & Ramsdell Finishing Lotion. \$1 for 6 oz. (3¢). Nationally available.

(Continued next page)

GOOD

The following did not streak, had satisfactory covering power, but rubbed off or were not water-resistant.

Louise André (Associated Merchandising Corp.¹). \$1 for 16 oz. (1¢). Nationally available.

Professional Leg Make-Up (Lander). 10¢ for 1½ oz (1¢). Rubbed off and was not water-resistant. Nationally available.

Macy's Hose-Tex. 74¢ for 8 oz. (1½¢). Was not water-resistant. Available at Macy's, New York City.

Satin Glow. 59¢ for 6 oz. (1½¢). Rubbed off and was not water-resistant. Available at The Fair, Chicago.

Ann Barton Leg Make-Up Cat. No.—5774 (Sears, Roebuck). 39¢ postpaid (including tax) for 4 oz. (1½¢). Was not water-resistant. Available by mail order.

Shineproof Cosmetic Stockings (Spooner). 59¢ for 6 oz. (1½¢). Was not water-resistant. Nationally available.

Perlac. 59¢ for 6 oz. (1½¢). Rubbed off. Was not water-resistant. Nationally available in department and specialty stores.

CD Cosmetic Stockings (Cooperative Distributors, Inc., NYC). 59¢ for 6 oz. (1½¢). Rubbed off. Available in NYC, by mail order and in some Co-op stores.

Leg Show (Dorothy Gray). \$1 for 10 oz. (1½¢). Rubbed off. Nationally available.

Rose Laird Leg Tone. 94¢ for 8 oz. (2¢). Was not water-resistant. Available in large cities.

Trique Smooth-On Hose (Anre). \$1 for 8 oz. (2¢). Had only fair covering power. Nationally available.

Ardena Velva Beauty Film (Elizabeth Arden). \$1 for 4¼ oz. tube (2½¢). Rubbed off. Nationally available.

Legstick (Helena Rubinstein). 75¢ for 1¼ oz. stick (2½¢). Rubbed off. Nationally available.

Charbert Leg Make-Up. \$1 for 6 oz. (3¢). Was not water-resistant. Nationally available.

Charles of the Ritz Leg Make-Up. \$1 for 6 oz. (3¢). Was not water-resistant. Nationally available.

Leg Tone (Wallace Laboratories). \$1 for 6 oz. (3¢). Was not water-resistant. Nationally available.

Leg Makeup Film (Frances Denney). \$1 for 6 oz. (3¢). Nationally available.

Sheertone Antiseptic Liquid Stockings (Elisabeth Rae).

* For a list of AMC stores, see page 10.

GOOD—CONT'D

69¢ for 4 oz. (3¢). Rubbed off. Nationally available in department stores.

Armand Leg Make-Up. \$1 for 6 oz. (3¢). Was not water-resistant. Nationally available.

Goubaud Leg Film. 75c for 4 oz. (3¢). Was not water-resistant. Available in department stores East of Kansas City.

Velva Leg Film (Elizabeth Arden). \$1 for 5 oz. (3½¢). Was not water-resistant. Nationally available.

Mexitan Leg Make-Up. (Bonne Bell). \$1 for 5 oz. (3½¢). Rubbed off. Available in the Middle, Central and Far West, and in Philadelphia and Baltimore.

Aquacade Leg Lotion (Helena Rubinstein). \$1 for 4 oz. (4¢). Was not water-resistant. Nationally available.

Stocking Lotion (Harriet Hubbard Ayer). \$1 for 4 oz. (4¢). Rubbed off. Nationally available.

Débonair Liquid Cheffawn (Rochester Laboratories). \$1.50 for 6 oz. (4¢). Rubbed off. Was not water-resistant, but water spots could be blended into the "stocking" with moist finger tips. Nationally available.

Sylcon Cream Hose (Hirsch Laboratories). 25¢ for 1 oz. jar (5¢). Rubbed off. Available in the Middle West, the South and in New England in 5 & 10¢ stores.

Nina Stockings out of a Bottle (Produits Nina, Inc.). \$1 for 2 oz. (8½¢). Rubbed off. Nationally available in department stores.

FAIR

The following did not streak, but had poor covering power; rubbed off or were not water-resistant.

Venida Liquid Hosiery (Rieser Co., Inc.), 25¢ for 4 oz. (1¢). (When sold with "Magic Bloc" hair remover—an abrasive—the cost is 50¢ for 4 oz.). Streaked slightly. Nationally available.

Fay's Liquid Leg-Tone. 25¢ for 4 oz. (1¢). 10¢ for 1 oz. (2¢). Rubbed off and was only slightly water-resistant. Available in the New York metropolitan area.

Duration Leg-Do (Lehn & Fink). 50¢ for 8 oz. (1¢). May streak if not carefully applied. Nationally available.

Plat-Num. 10¢ for 1½ oz. (1¢). Was not water-resistant. Had a very objectionable odor. Nationally available in 5 & 10¢ stores.

(Continued next page)

FAIR—CONT'D

La Bonita (House of Hollywood). 25¢ for 4 oz. (1¢). Rubbed off. Gave very powdery appearance when enough was used to give better covering power. Available in F. H. Kress stores.

Howe's Hollywood Leg Make-Up. 25¢ for 3½ oz. (1¢). Rubbed off. Was only slightly water-resistant. Nationally available in 5 & 10¢ stores.

Gaby. 25¢ for 3 oz. (1½¢). Rubbed off; was not water-resistant. Nationally available.

Blanchard Liquid Hosiery. 49¢ for 6 oz. (1½¢). Was not water-resistant. Available in the Northeastern States.

Miner's Liquid Make-Up for the Legs. 10¢ for 1 oz. (1½¢). Was not water-resistant. May streak if not carefully applied. Nationally available.

Schoell's Leg Make-Up. 50¢ for 4 oz. (2¢). Was not water-resistant. Purchased in Oakland, Calif.

The Liquid Stocking (Benj. Ansehl Co.). \$1 for 6 oz. (3¢). Rubbed off. Was not water-resistant. Also sold in combination with **Base-Tex Leg Make-Up Foundation** (50¢ for 6 oz.) for \$1 special. Using **Base-Tex** made no perceptible difference in the appearance of makeup.

Du Barry Powder Lotion (Richard Hudnut). \$1 for 5 oz. (3½¢). Rubbed off. Was not water-resistant. Nationally available.

Barbara Gould Complexion Dressing. \$1 for 4¼ oz. (4¢). Rubbed off. Nationally available.

Letheric Soft Focus Leg Make-Up. \$1 for 4 oz. (4¢). Was not water-resistant. Nationally available.

Madame Olga Pataky (Liquid Beautifier). \$1.25 for 4 oz. (5¢). Rubbed off. Purchased in Miami, Fla.

POOR

The following streaked and were unsatisfactory in appearance.

Bottle of Stockings (Irene Blake). 50¢ for 8 oz. (1¢). Rubbed off.

Leg-Tan (Lorr Laboratories). 25¢ for 3 oz. (1½¢). Was not water-resistant.

Zip Leg-Lure (Jordeau, Inc.). \$1 for 11 oz. jar (2¢). Was not water-resistant.

Mavis Liquid Hose (V. Vivaudou, Inc.). 25¢ for 3 oz. (1½¢). Was not water-resistant.

Petal Bloom Finishing Lotion (Primrose House). \$1 for

POOR—CONT'D

8 oz. (2¢). Rubbed off somewhat. Was not water-resistant. Bottle had very small opening making it hard to use.

Golden Peacock Liquid Stockings. 50¢ for 4 oz. (2¢). Rubbed off.

Marcelle Hypo-Allergenic. 50¢ for 4 oz. (2¢). Rubbed off. **Chantrey Leg-Tone** (L. Bamberger & Co.). \$1 for 8 oz. (2¢).

Toney (Chemical Specialties Co.). 49¢ for 4 oz. (2¢). Rubbed off.

Jacqueline Cochran Leg Make-Up. \$1 for 6 oz. (3¢). Streaked slightly and had only fair covering power.

Seventeen Skinhthetic Leg Make-Up. \$1 for 6 oz. (3¢). Streaked.

Leg-Charm. (Montgomery Ward Cat. No.—1758) (Sears Roebuck Cat. No.—3152) 52¢ including tax for 3½ oz. jar (3¢). Rubbed off. Was not water-resistant. Jar from Montgomery Ward had objectionable odor; may have turned rancid.

Armand Leg Make-Up. 50¢ for 3 oz. jar (3½¢). Rubbed off. Was not water-resistant.

Tattoo (Associated Distributors). \$1 for 4 oz. (4¢). Rubbed off. Claimed to contain insect-repellent.

TINTS

The following had practically no covering power—gave only a tanned appearance—did not rub off, were not water-resistant, and required very careful application to prevent streaking.

Col-R-Hose (Vi-Jon Laboratories, Inc.). 10¢ for 2 oz. (1¢). Available in the Eastern States.

E-Z Magic Stocking. (Plat-Num Labs.). 10¢ for 1½ oz. (1¢). Nationally available in 5 & 10¢ stores.

Tussy Leg-A-See (Lehn & Fink Products Corp.). 50¢ for 6 oz. (1½¢). Nationally available.

Esther Bonney's Artificial Hosiery (Comfort Mfg. Co.). 25¢ for 3 oz. (1½¢). Nationally available in 5 & 10¢ stores.

Kathryn Davis Bottled Hose (M.V.C. Labs.). 10¢ for 1 oz. (1½¢). Nationally available in Kresge and Woolworth stores.

Patrick's Leg-Art. (Sears Roebuck Cat. No.—5986). 41¢

POOR—CONT'D

including tax for 3 oz. ($2\frac{1}{2}$ ¢). Available by mail order.
Tone Bittersweet Tint for the Legs. \$1 for 4 oz. (4¢).
 Nationally available.

LIPSTICK

Experts consider the best lipstick to be fairly hard and medium greasy. It should have good adherence to the lips (but not to fabrics) and should alter little in color after application. It should not become soft at ordinary temperatures or melt on a warm Summer day; yet it must not remain hard at high temperatures, or it will crumble. The perfume of the lipstick must be pleasant and must mask the undesirable odors of the greases it contains. The flavor should be bland.

Very few metal lipstick containers are to be found on the market; instead most lipsticks are sold in plastic, wooden or cardboard containers. If you have a metal case from an old lipstick, try to get a refill for it, or if that is not available, try taking the lipstick out of your new case and inserting it into your old, metal one.

A number of lipstick brands have changed in quality since CU's last tests (see *Reports*, May 1939). Variations in quality between large and 10¢ sizes were found in many brands. In some brands tested, differences in pigment between a light and dark shade caused considerable variation in other qualities of the stick, though in some brands the properties of their whole line appeared uniform.

Because of the chaotic number of color names created by lipstick makers, the ratings include the manufacturer's name of the color tested plus a number in parenthesis referring to CU's classification according to this scheme: (1) bright, yellowish red; (2) medium red, with orange cast; (3) bright, true red; (4) dark, true red; (5) light, purplish red; (6) dark, purplish red.

From the *Reports*, August 1942.

BEST BUYS

The following brands of the "Acceptable" list were judged to offer the best value for the money.

Tayton's. 10¢; cost per gram, 7¢. "Sunkissed Poppy," (2); "Toreador," (4). Perfume satisfactory. Available in 10¢ stores.

Elizabeth Kent. 10¢; cost per gram, 5¢. "Vivid," (2); "Rio Red," (3). Perfume fair. Available in 10¢ stores.

BEST BUYS—CONT'D

Heather. 10¢; cost per gram, 4¢. "Vivid Glow," (1); "Glorifying Red," (4). Available in 10¢ stores.

Kissproof. 10¢; cost per gram, 7¢. "Red Galore," (3); "Natural," (4). Perfume fairly good. Available in 10¢ stores.

ACCEPTABLE

(*In order of quality, but note comments*)

Max Factor. 50¢; cost per gram, 33¢. "Light," (2); "Medium," (3) Perfume good. Available nationally.

Don Juan. \$1.00; cost per gram, 44¢. "Hostess Red," (3); "Raspberry," (6). Perfume good. 10¢ size was found "Not Acceptable." Available nationally.

Tangee (Geo. W. Luft Co., NYC). 50¢; cost per gram, 26¢. "Theatrical Red," (2); "Red-Red," (3). Perfume good. Available nationally.

Helena Rubinstein. \$1.00; cost per gram, 48¢. "Life Red," (3); "Red Velvet," (4). Perfume good. Available nationally.

Revlon. \$1; cost per gram, 33¢. "Red Punch," (3); "Cherry Coke," (4). Perfume fair. Available nationally.

Tayton's (see "Best Buys").

Evening in Paris. 55¢; cost per gram, 30¢. "Light," (2); "Cerise," (4). Perfume fair. Available nationally.

Jacqueline Cochran. \$1; cost per gram. 50¢. "Merry-Go-Round," (2); "Captain's Choice," (6). Perfume fair. Available nationally.

Seventeen. \$1; cost per gram, 34¢. "Light," (1); "Maroon" (6). Perfume fair. Available nationally.

Elizabeth Kent (see "Best Buys").

Drezma. \$1; cost per gram, 40¢. "Cool Flame," (3); "Medium," (orchid-pink). Perfume good. "Cool Flame" had low softening point. 10¢ size was found "Not Acceptable." Available nationally.

Lucien Lelong. \$1; cost per gram, 49¢. "Flippant," (3); "Poker Chip Red," (2). Perfume fair. Available nationally.

Elmo. \$1; cost per gram, 53¢. "Paint Brush," (2); "Duponnet," (4). Perfume fair. Available nationally.

Yardley. \$1.10; cost per gram, 44¢. "Vivid," (2); "Penny Red," (2). Perfume fair.

Frances Denney. \$1; cost per gram, 50¢. "Champagne," (2); "Dark Wine," (6). Perfume fairly good.

Dorothy Gray. \$1; cost per gram, 48¢. "Avis," (2);

ACCEPTABLE—CONT'D

"Coppertan," (3). Perfume fair. Both had low softening points.

Vita Ray. \$1; cost per gram, 35¢. "Blush," (2); "Exotic," (3). Perfume fair. Both had low softening points.

Americe (Marshall Field & Co., Chicago). \$1; cost per gram, 31¢. "Light," (3); "Vivid Red," (3). Sticks had castor oil odor which was not covered completely by the perfume.

CD. 25¢; cost per gram, 14¢. "Light," (2); "Dim Light," (6). Perfume fair. Softening point of "Light" rather low. Available in NYC from Cooperative Distributors, or by mail order.

House of Westmore. 50¢; cost per gram, 19¢. "Strawberry Blonde," (3); "Charel," (5). Perfume good. "Strawberry Blonde," had low softening point; "Charel" changed color.

Colonial Dames. 50¢; cost per gram, 26¢. "Light," (1); "Romany Red," (3). Perfume fair.

Heather (see "Best Buys").

Luxor. 50¢; cost per gram, 20¢. "Roseblush," (pink); "Tulip Red," (3). Perfume fairly good. Softening point of "Tulip Red" rather low.

DuBarry (Richard Hudnut). \$1; cost per gram, 38¢. "Carmeem," (3); "Regal Red," (6). Perfume fair.

Kissproof (see "Best Buys").

Marvelous (Richard Hudnut). 10¢; cost per gram, 13¢. "Dresden Carmeen," (3). Perfume fair.

Barbara Gould. \$1; cost per gram, 48¢. "Pink Camillia," (3); "Medium," (5). Perfume fair but weak.

Woodbury. 25¢; cost per gram, 16¢. "Flame," (1); "Burgundy," (4). Perfume of "Flame," fair; of "Burgundy," poor. Adherence of "Burgundy," poor.

Charles of the Ritz. \$1; cost per gram, 53¢. "Clair," (1); "Fandango Night," (6). Perfume fair.

Lady Esther. 25¢; cost per gram, 13¢. "Madcap," (3); "Cherry Red," (5). Perfume fair. 10¢ size was found "Not Acceptable."

House of Westmore. 25¢; cost per gram, 19¢. "Strawberry Blonde," (3); "Garnet" (6). Perfume fair. "Strawberry Blonde" had very low softening point.

Primrose House. \$1; cost per gram, 50¢. "Light," (1); "Carnival," (5). Perfume fair.

Cashmere Bouquet. 10¢; cost per gram, 5¢. "Changeable,"

ACCEPTABLE—CONT'D

(orange which changes to pink); "Deep Red," (4). Perfume fair.

Translucid (Houbigant). \$1; cost per gram, 58¢. "Cherry," (3); "True Ruby Red," (3). Perfume fairly good.

Flame Glo. 10¢; cost per gram, 6¢. "Medium," (3); "Raspberry," (6). Perfume fair.

Irresistible. 10¢; cost per gram, 6¢. "Pink Rose," (3); "Medium," (4). Perfume fairly good.

Macy's (R. H. Macy & Co., NYC). 44¢; cost per gram, 21¢. "Holly Red," (2); "Tango Red," (3). Swivel container. Perfume fair. Softening points too low.

Tangee. 10¢; cost per gram, 17¢. "Natural," (orange which changes to purplish pink); "Red-Red," (3). Perfume strong and good. "Natural" had extremely low softening point.

H.S.G. 39¢; cost per gram, 27¢. "Light," (2) "Dark," (3). Perfume fair. Adherence of "Dark," poor.

Richard Hudnut. \$1; cost per gram, 43¢. "Carmen," (3); "Black Cherry," (4). Perfume fair. Consistency of "Black Cherry," soft and greasy, adherence poor.

Louise Andre (A.M.C.¹). \$1; cost per gram, 57¢. "Ruby Red," (3); "Rebellion," (2). Perfume fair. Softening point of "Ruby Red" too low.

Drezma. 25¢; cost per gram, 16¢. "Medium," (orchid). Perfume fair. 10¢ size was found "Not Acceptable."

Bal Masque (Letheric). \$1; cost per gram, 51¢. "Indelible Vivid," (1); "Brune Satine," (2). Perfume fair. "Brune Satine" had unpleasant bitter flavor, and tendency to leave permanent stain on cotton fabric.

Chiffon (Primrose House). 10¢; cost per gram, 6¢. "Chiffon Red," (3); "Raspberry," (5). Perfume fair. Softening point of "Chiffon Red" low.

Leon Laraine. 75¢; cost per gram, 30¢. "Rose Red," (2); "Raspberry," (2). "Rose Red" had unpleasant taste; "Raspberry" had unpleasant, rancid odor, poor adherence.

Daggett & Ramsdell. \$1; cost per gram, 50¢; "Geranium Red," (2); "Cherry Red," (4). "Geranium Red" had unpleasant, greasy odor and taste. Both had rather low softening points.

Almay. \$1.10; cost per gram, 50¢. "Cherry," (3); "Dark,"

¹ For a list of AMC stores, see page 10.

ACCEPTABLE—CONT'D

(4). Perfume fair. Softening point of "Cherry" too low. "Dark" left permanent stain on cotton fabric.

Tattoo. 49¢; cost per gram, 21¢. "Pastel," (3); "Hawaiian," (2). Perfume fair. "Pastel" leaves deep, permanent stain on cotton fabric.

Angelus Rouge Incarnat. 55¢; cost per gram, 42¢. "Coronation Red," (2); "Medium," (4). Perfume fairly good. Consistency of "Medium," soft and greasy, softening point too low.

D'Orsay. \$1; cost per gram, 33¢. "Geranium," (3); "Framboise," (5). Perfume fair. Softening point of "Framboise" too low.

Prince Matchabelli. \$1; cost per gram, 27¢. "C," (3); "R," (4). Perfume fairly good. Consistency of "R," soft and greasy.

Coty Sub-Deb. 50¢; cost per gram, 36¢. "Bright," (2); "Gitane," (1). Perfume fair. Softening points too low.

Hampden. 10¢; cost per gram, 6¢. "Blonde," (1); "Ruby Red," (3). Perfume fairly good. Softening points too low.

Lip Tip (Miner's Inc.). 10¢; cost per gram, 8¢. "Radiant Red," (3); "Red Vogue," (3). Perfume fair. Softening point of "Red Vogue" too low.

Pond's "Lips". 55¢; cost per gram, 22¢. "Heart Beat," (dark, purplish); "Honey," (2). Perfume fair. Adherence of "Heart Beat," poor. Softening points, especially of "Honey," too low. 10¢ size was found "Not Acceptable."

Rejuvia. 10¢; cost per gram, 4¢. "Orchid," (bright orchid); "Brunette," (5). Perfume fair. Softening points too low.

Marvelous (Richard Hudnut). 55¢; cost per gram, 14¢. "Carmeen Dresden," (3); "Parisian," (2). Perfume fair. Softening point of "Parisian," too low.

Colonial Dames. \$1; cost per gram, 33¢. "Light," (1); "Medium," (4). Perfume fair. Softening point of "Light," extremely low. "Medium" left permanent stain on cotton fabric.

NOT ACCEPTABLE

L'Adonna. 50¢; cost per gram, 20¢. "Light," (1) "Black Cherry," (6). "Light" had rancid odor and taste; perfume of "Black Cherry," fair. Softening point of

NOT ACCEPTABLE—CONT'D

"Light" too low; it also left strong, permanent stain on cotton fabric.

Elizabeth Post. 10¢; cost per gram, 6¢. "Heavenly Pink," (orchid); "Indian Red," (4). Perfume fair. Softening points, especially of "Heavenly Pink," too low; latter also left permanent stain on cotton fabric.

Princess Pat. 10¢; cost per gram, 7¢. "Light," (2); "Natural," (3). Perfume and taste of "Light" poor; of "Natural," fair. Adherence of "Light" poor. Softening point of "Light" too low.

Embassy. 20¢; cost per gram, 10¢. "Blonde," (1); "Plum," (5). Perfume fair. Softening points too low.

Pond's "Lips." 10¢; cost per gram, 5¢. "Honey," (2); "Dark Secret," (4). Perfume fair. Softening points, especially of "Dark Secret," too low; latter also leaves permanent stain on cotton. 55¢ size "Acceptable."

Park & Tilford. 10¢; cost per gram, 6¢. "Medium," (orchid); "Rose Glow," (5). Perfume fair, Softening points too low.

Harriet Hubbard Ayer. 55¢; cost per gram, 31¢; "Ayer Pink," (1); "Flag Red," (2). "Ayer Pink" had rancid odor; perfume of "Flag Red" good. Adherence of "Ayer Pink" poor. "Ayer Pink" had unpleasant flavor, and too low softening point. "Flag Red" left deep, permanent stain on cotton fabric.

Lady Marlow. 69¢; cost per gram, 23¢. "Light," (2); "Haunting" (brownish-red). Perfume fair. Softening points too low. "Haunting" left permanent stain on cotton fabric.

Elizabeth Arden. \$1.50; cost per gram, 79¢. "Mat Victoire" (3); "Ruby" (6). "Mat Victoire" had rancid odor; perfume of "Ruby" fair. Consistency of "Mat Victoire" soft and greasy, adherence poor. Softening points, especially of "Mat Victoire" too low.

Lady Esther. 10¢; cost per gram, 14¢. "Scamp Red," (1); "Cherry Red," (5). Perfume fair. Consistency of "Scamp Red" soft and greasy. Softening points too low. 25¢ size was "Acceptable."

Don Juan. 10¢; cost per gram, 13¢. "Orange Red," (2); "Raspberry," (6). Perfume and taste of "Orange Red," poor; of "Raspberry," fair. Consistency of "Orange Red" soft and greasy. Adherence of "Orange Red" poor. \$1 size was "Acceptable." (Continued next page)

NOT ACCEPTABLE—CONT'D

MW Cat. No.—1359 (Montgomery Ward). 42¢; cost per gram, 20¢. "Coral," (1); "Brunette," (6). Perfume fair. Consistency of "Coral," soft and greasy. Softening points extremely low.

Guerlain. \$1.50; cost per gram, 53¢. "Pois de Senteur," (orange-pink); "Dark," (6). Perfume fair. Adherence poor. Softening points extremely low. Left permanent stains on cotton fabric.

Drezma. 10¢; cost per gram, 25¢. "Light," (3). Perfume poor. Consistency soft and greasy. Adherence poor. Softening point too low. 25¢ and \$1 sizes "Acceptable."

PERMANENT WAVES

Though techniques may vary, practically all permanent waves do essentially the same thing. They distort the hair shaft into a curl by winding it around a rod, and then make the distortion "permanent" by application of an alkaline solution and heat. The alkalies used are ammonia (which has an unpleasant odor), certain organic compounds (less unpleasant, but like ammonia in action) or sodium and potassium compounds (odorless, but they become concentrated as heat is applied and may harm the hair).

Heat may be applied electrically (machine wave) or chemically (machineless). The machine wave is the more popular method and is at least as safe and comfortable as the machineless. Better machines are regulated so that they cannot rise above a given temperature, or are operated at low voltage to reduce shock hazard.

The heat of machineless waves is supplied by chemical reaction which takes place when water is added to the heating pads. Pads of the same brand may not be uniform; moreover, there is no standard for the correct amount of water to be added. For both these reasons, temperatures may vary considerably.

In "remote control" waves, the hair is wound as for a machine wave, and then a pre-heated element is put on the curls and allowed to cool on the hair. There are no special advantages to this method, and the high initial temperature required may harm the hair.

With the machine wave control, curling depends on time of heating; with machineless or "remote control," the curl is regulated by strength of solution used.

Home permanent waves are almost never successful, CU's tests showed. The chief difficulty with self-applied permanents such as *Endura*, *Charm-Kurl* and similar products, is that the chemicals do not work effectively unless the hair is under considerable tension. And this tension is practically impossible to achieve without the assistance of a skilled operator and mechanical equipment.

Following are some general facts about permanent waving, condensed from CU's studies of the subject:

A permanent wave, carefully applied, does no harm to hair or scalp.

The success of a permanent wave is determined much more by the skill and technique of the operator than by the composition of the materials used.

Prices of permanent waves range from \$1 to \$25 or more, depending on a variety of factors. Although many beauty parlors have discontinued low-priced waves, you should still be able to get a good wave from a skilled operator for \$5 to \$7.50.

Some manufacturers put out a variety of brands, selling at different prices, but practically alike in composition (for example, *Zotos*, *Jamal*, *Vapor Marcel*, and *Peer*, are all made by Sales Affiliates). There's no point in paying for brand name alone.

A test curl is essential before every wave; it is particularly important for white, dyed or bleached hair.

There is no such thing as a self-setting wave.

"Wave-cuts" are not all they're claimed to be. They require frequent "push-ups" (setting); each haircut must be an expensive wave-cut; and they can't make the ends of the hair curl.

Beware of new and unrecognized methods of permanent waving. In the past, some have been found to be extremely dangerous.

POWDER BASES

Powder bases form a coating on the skin to which the make-up will adhere; they also should conceal small blemishes and skin discolorations and should contain emollients to keep the skin soft and flexible.

Vanishing creams and lotions are the foundation for most make-up bases. Basically a vanishing cream is an oil-in-water emulsion consisting of soap—a special type with a large excess of stearic acid—mixed with water and a little glycerin. Lotions are simply vanishing creams

in a more liquid form, easier than a cream to apply smoothly and evenly. Some creams and lotions have face powder added; this improves the appearance on the skin. Vanishing creams and lotions can be used on practically all types of skin.

"Liquid powders" are suspensions of face powder in a mixture of alcohol, glycerin and water. They are put on with finger tips or with cotton. They may be difficult to apply evenly, since the powder tends to settle out. "Liquid powders" are best used on oily skin because alcohol has a tendency to dry the skin.

Cold creams with added powder are best used on dry skins. A very thin film is sufficient to make the powder adhere; if more cream is used it gives an oily, shiny appearance.

Sticks or cakes, a newer type of make-up base, are made of a fat-wax mixture with considerable pigment and no water. They should be hard enough to keep their form in hot weather, yet soft enough to be easy to apply. The stick or cake is applied in small dabs, then spread with the finger tips.

"Pancake" make-up base contains a large proportion of pigment mixture plus a small amount of a wax-oil-water emulsion with a high wax content and a low water content. The product is thoroughly dried, finely ground, mixed with a thin gum solution and pressed into cakes. When applied with a moistened puff, sponge or cotton, it dries to a thin powder-like film. Pancake make-up may be used instead of face powder or as a foundation for it.

No attempt has been made to rate powder bases, since the choice is largely one of personal preference. CU advises that you purchase several types in "trial size" to see which suits you best. Though some manufacturers have discontinued "sample" sizes, all types are still available at 5 & 10¢ stores.

From the *Reports*, August 1943.

ROUGE

Different brands of rouge vary so little in quality that choice should be made on the basis of price, convenience of container and appropriateness of color. Best buys come from 5&10¢ store.

Colors are not standardized; one must examine the

rouge itself rather than the label on the box, and remember that the color of rouge often looks different when it is applied to the skin.

Rouge is sold in many forms: cake, powder, liquid, cream and paste. Cake rouge is used most widely. Both powder and cake are highly colored face powders; added to the latter is a binding agent to keep it from crumbling. This is usually a gummy substance such as tragacanth, but starch is sometimes used. Starch tends to have a drying effect; people with dry skins, and the few who are especially sensitive to starch should avoid rouges containing it. If you notice any irritation from a particular brand, stop using it at once.

Cream rouge may be either the cold-cream (greasy) type or the vanishing-cream (non-greasy type). These rouges have a rather limited range of colors. More common and more satisfactory than the creams are the paste rouges, which are highly colored pigments in a petrolatum base. They actually tint the skin, while the cream rouges merely form a colored film.

SANITARY BELTS

Many sanitary belts, made under wartime restrictions, have little or no elastic content. Although pre-war elastic belts were superior, the quality of the elastic used now is poor, and adjustable, non-elastic belts are often better buys. Look for the following features:

Adjustability: If there is no elastic, look for easy adjustability. A closed slide adjustment is generally considered better than hooks and eyes or a series of buttons and buttonholes.

Tabs: Many are made for use with safety pins. Those with a gripper arrangement are as secure as tabs with pins provided the pad is properly attached and the ends of the gauze tucked under. One or both tabs should be free to slide on the belt so that the tabs can be properly centered after the belt is adjusted.

If you wear a sanitary belt at your waistline, see that the tabs are long enough to reach to the gauze, with enough left over for fastening. Most women prefer to wear belts lower down; tab lengths are generally made for this method of wear.

Width: On the belts examined, width ranged from $\frac{3}{8}$ inch to 1 inch. In non-elastic belts, the wider ones are generally found to be more comfortable.

(Continued next page)

Construction: See that all stitching is strong and well secured; many belts are so flimsily put together that stitches rip out and attachments fall off under very little strain. Tabs made with the raw edges folded in, but not stitched down, will ravel and lose their shape when washed.

Material: A mixture of cotton and rayon, woven to look like elastic webbing, is generally used for the belt. It's best to buy a size larger than you need to allow for shrinkage in washing. Tabs should be made of the same material as the belt, or of some other strong material, finished at the edges.

From the *Reports*, October 1943.

SANITARY PADS & TAMPONS

There are four types of construction generally used for sanitary pads:

1. Pads constructed of sheets of paper with water-repellent backing.
2. Pads made of sheets of paper without water-repellent backing.
3. Pads of cellulose linters with water-repellent or absorbent wrappers.
4. Pads with stockinet wrappers filled with absorbent cotton.

Differences within these groupings were limited to details such as strips of water-repellent cotton linters or water-repellent paper on the sides; wrappers of cotton linters, etc. There were also differences in weight and bulkiness in individual brands within each construction group.

Relative efficiency of similar pads appeared to be in direct proportion to the absorbency of the filler used; those using water repellent instead of absorbent paper-fillers were of little value.

Since pads are generally changed quite frequently, small, compact pads, which are nevertheless capable of taking care of heavy flow, were considered more desirable than very bulky pads with larger total absorption than is normally needed.

Though most brands of sanitary pads are sold as "easily disposable," they are likely to clog plumbing systems unless special care is taken. The best procedure is to use a covered container or garbage pail for disposal.

● TAMPONS

Tampons are compact and small, and they can be worn with less inconvenience than sanitary pads. But tampons are less absorbent than pads and can be used through the entire period only by women with slight flow; others find them useful during the last days of the period. Most gynecologists recommend the use of tampons only for married women.

No conclusive clinical study of the safety of tampons has yet been reported. Some doctors hold that infection of the uterus and tubes may occur as the result of damming back the flow, but there is little likelihood that this will occur in women with normal or slight flow. One decided advantage in the use of tampons is removal of the possibility of contaminating the vaginal area by Trichomonas parasites present in the fecal matter of some people.

Tampons are either *compressed*—pressed under high pressure to final size; or *crimped*—pressed lightly to final size. The crimped type will absorb liquid more rapidly than the compressed type, but will strike through more quickly. In all-around efficiency, under most widely prevalent use conditions, both types are about equally efficient.

● PRICES

OPA has set the following prices as the maximum which may be charged for various sized packages of sanitary pads (as of November, 1943). They apply only to the paper and cellulose-filled varieties; cotton-filled napkins are not under price ceilings.

Pads per Package	Ceiling Price
8.....	15¢
12.....	22¢
54.....	90¢
56.....	94¢

Packages containing amounts different from those specified are to be priced proportionately.

● RATINGS

Ratings of pads were based on all-round utility. Conditions of test duplicated, insofar as possible, conditions of actual use.

Figures in parentheses give cost per dozen.

Tampons were tested to determine both speed of absorption and total absorption before leaking.

From the *Reports*, October 1943.

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PADS

BEST BUYS

The following brands were judged to offer the best values for the money, in the order given.

Sanimac Triple Soft (R. H. Macy & Co.). 87¢ for 60 (17.5¢). Absorbent paper, with water-repellent backing; tapered ends. Cotton linters on body side extending over edges of pad. Available at Macy's department store, NYC.

CD Hygienic Pads (Cooperative Distributors). 69¢ for 48 (17.3¢). Absorbent paper, with water-repellent backing; tapered ends. Available from Cooperative Distributors, NYC or by mail order.

Kotex Regular (International Cellucotton Prod. Co.). \$1.75 for 108 (19.4¢). Absorbent paper surrounded by cotton linters, with center layer of grooved paper to distribute liquid along length of pad. Had water-repellent sheet at back of grooved paper, and strips of water-repellent paper at edges. Available nationally.

Aimcee (Associated Merchandising Corp.). \$1.49 for 100 (17.9¢). Absorbent paper, with water-repellent backing; tapered ends. Cotton linters on body side, extending over edges. Available at A.M.C. stores.¹

ACCEPTABLE

In order of quality without regard to price. Prices given are for the largest size packages generally available.

Gallia Large (White House). Cost per doz., 69¢. Cotton-filled pad with high absorbency. Available at the White House department store, San Francisco.

Sanimac Triple Soft (see "Best Buys").

CD Hygienic Pads (see "Best Buys").

Aimcee (see "Best Buys").

Bestnaps (Whelan Drug Stores). Cost per doz., 21¢. Absorbent paper, with water-repellent backing. Cotton linters on body side, extending over edges. Available nationally at Whelan stores.

Kotex Super (International Cellucotton Prod. Co.). Cost per doz., 22¢. Same construction as **Kotex Regular**, but wider and heavier. Available nationally.

Kotex Regular (see "Best Buys").

Kotex Junior (International Cellucotton Prod. Co.). Cost per doz., 22¢. Same construction as **Kotex Regular**, but

¹ For a list of AMC stores, see page 10.

ACCEPTABLE—CONT'D

narrower and lighter. Available nationally.

Sanimac Regular (R. H. Macy & Co.). 74¢ for 48 (18.5¢).

Absorbent paper, with water-repellent backing; tapered ends. Available at Macy's department store, NYC.

Lyncrest (W. T. Grant Stores). Cost per doz., 15¢. Absorbent paper, with water-repellent backing. Cotton linters on body side, extending over edges. Available nationally at Grant stores.

Gallia Medium (White House). Cost per doz., 59¢. Cotton-filled pad with good absorbency. Available at the White House department store, San Francisco.

San-Nap-Pak Regular (San-Nap-Pak Mfg. Co.). \$1.50 for 100 (18¢). Absorbent paper, with water-repellent backing; tapered ends. Cotton linters on body side, extending over edges. Available nationally.

Venus (Venus Corp.). Cost per doz., \$1.40. Cotton-filled pad with good absorbency. Available nationally.

Style-Pak (S. H. Kress & Co.). 33¢ for 20 (19.8¢). Absorbent paper, with water-repellent backing; tapered ends. Available nationally at Kress stores.

Velva-Naps (San-Nap-Pak Mfg. Co.). \$1.39 for 100. (16.7¢) Absorbent paper, with water-repellent backing; tapered ends. Available nationally.

Rite-Pak (W. T. Grant Co.). 15¢ for 8 (22.5¢). Absorbent paper, with water-repellent backing; tapered ends. Available nationally at Grant stores.

Penimaid (J. C. Penney Co.). Cost per doz., 18¢. Cellulose linters, with a sheet of water-repellent paper in a wrapper of absorbent paper. Layer of absorbent cotton linters around entire pad. Available at Penney stores.

Blue Diamond (Hearn's Dep't Store). Cost per doz., 21¢. Absorbent paper, with water-repellent cotton linters at back, covering center portion. Tapered ends. Available at Hearn's department store, NYC.

Lotus (Sioux Co.). 15¢ for 8 (22.5¢). Absorbent paper, with water-repellent backing. Available nationally at 10¢ stores.

Veldown (International Cellucotton Prod. Co.). \$1.67 for 120 (16.7¢). Cellulose linters, with a sheet of water-repellent paper in a wrapper of absorbent paper. Slightly water-repellent cotton linters at front and sides, and water-repellent strips at sides. Available nationally.

(Continued next page)

ACCEPTABLE—CONT'D

Topaz, Jr. (S. S. Kresge Co.). 15¢ for 8 (22.5¢). Absorbent paper, with cotton linters on body side extending over edges. Available nationally at Kresge stores.

San-Nap-Pak Jr. (San-Nap-Pak Mfg. Co.). Cost per doz., 21¢. Absorbent paper, with water-repellent backing; tapered ends. Available nationally.

Modess Regular (Personal Prod. Corp.). 89¢ for 56 (19.1¢). Made of cellulose linters with a sheet of water-repellent paper in a wrapper of absorbent paper and water-repellent paper; water-repellent cotton linters at back and sides. Available nationally.

Modess Junior (Personal Prod. Corp.). Cost per doz., 22¢. Same construction as **Modess Regular**, but narrower, and thinner. Available nationally.

Ward's Cat. No.—4733 (Montgomery Ward). 87¢ plus postage for 72 (14.5¢ plus postage). Cellulose linters, with a sheet of water-repellent paper in an absorbent paper wrapper; layer of cotton linters around entire pad. Available by mail order.

Sears' Cellu-Fluffs Cat. No.—5570 (Sears-Roebuck). 66¢ plus postage for 50 (15.8¢ plus postage). Cellulose linters, with a sheet of water-repellent paper in a wrapper of absorbent paper and slightly water-repellent paper; layer of cotton linters around entire pad. Available by mail order.

Loret (Seabury, Inc.). 15¢ for 8 (22.5¢). Cellulose linters, with a sheet of water-repellent paper in a wrapper of absorbent paper and water-repellent paper; gauze strip at back. Entire pad in special wrapper of pressed cellulose linters instead of gauze, appeared satisfactorily strong. Available nationally.

Soft Naps (Whelan Drug Stores). Cost per doz., 21¢. Cellulose linters in absorbent paper wrapper, with water-repellent backing. Available nationally at Whelan stores.

Dixie Belle (Acme Cotton Prod. Co.). Cost per doz., 20¢. Cotton-filled pad with good absorbency. Available nationally.

Macy's Economy (R. H. Macy & Co.). \$1.88 for 144 (15.7¢). Cellulose linters, with absorbent paper on both sides; layers of cotton linters on body side, extending over edges of pad. Water-repellent backing. Available at Macy's department store, NYC.

ACCEPTABLE—CONT'D

Hudson's (J. L. Hudson Co.). 79¢ for 50 (19¢). Absorbent paper, with water-repellent backing. Cotton linters on body side, extending over edges. Available at Hudson's department store, Detroit.

Redi-Pak (W. T. Grant Stores). Cost per doz., 15¢. Cellulose linters in absorbent paper wrapper; layer of cotton linters on body side, extending over edges. Water-repellent backing. Available nationally at Grant stores.

The following brand is "acceptable" only for periods when flow is small.

Gracets (Gimbels Bros. Dept. Stores). Cost per doz., 20¢. Absorbent paper with cotton linters on body side extending over edges; tapered ends. Available at Gimbel's.

NOT ACCEPTABLE

(Because of poor absorbency)

Sanoval Regular (S. H. Kress & Co.). 15¢ for 8 (22.5¢). Absorbent paper, with a layer of cotton linters on body side, extending over edges.

Cashmere (F. W. Woolworth Stores). 15¢ for 10 (18¢). Absorbent paper.

Iris (Sioux City Co.). Cost per doz., 20¢. Absorbent paper, with a layer of cotton linters on body side, extending over edges.

Nicies Fluff Type Cat. No.—6EH2 (Chicago Mail Order Co.). 72¢ plus postage for 50 (17.3¢ plus postage). Cellulose linters, with a sheet of water-repellent paper in a wrapper of absorbent and water-repellent paper. Cotton linters wrapped all around pad.

C. M. O. Economy Package Fluff Type Cat. No.—6EH3 (Chicago Mail Order Co.). 98¢ plus postage for 84 pads (14¢ plus postage). Cellulose linters, with a layer of slightly water-repellent paper at front and water-repellent back.

Bonita (S. H. Kress & Co.). Cost per doz., 20¢. Cotton-filled pad with poor absorbency.

Sanoval Daintinaps Jr. (S. H. Kress & Co.). 30¢ for 20 pads (18¢). Absorbent paper.

Co-op (National Cooperatives, Inc.). Cost per doz., 21¢. Water-repellent paper, with a water-repellent backing.

Nappettes (Liggett Drug Co.). Cost per doz., 18¢. Cellu-

NOT ACCEPTABLE—CONT'D

lose linters, with a sheet of water-repellent paper in an absorbent paper wrapper; cotton linters on body side extending over edges.

NuVel (Walgreen Co.). Cost per doz., 19¢. Layers of water-repellent paper, with a layer of cotton linters on body side, extending over edges.

Nicies. Cat. No.—6EH1 (Chicago Mail Order Co.). 72¢ plus postage for 50 (17.3¢ plus postage). Water repellent paper, with a layer of cotton linters on body side, extending over edges.

C.M.O. Economy Package Cat. No.—6EH4 (Chicago Mail Order Co.). 98¢ plus postage for 84 (14¢ plus postage). Water-repellent paper.

TAMPONS**ACCEPTABLE**

In order of increasing cost per dozen. Effectiveness was found similar for all brands tested.

Fibs (International Cellucotton Prod.). 42¢ for 34 (14.8¢). Compressed rolls of crepe paper, wrapped in a loosely-woven gauze-like jacket. String anchored to plug through hole and tied around tampon. Available nationally.

Holly-Pax (Universal Cotton Prod.). 59¢ for 48 (14.8¢). Sheets of cotton linters, wound around a string and compressed. Available nationally.

Meds (Personal Prod. Corp.). 79¢ for 50 (19¢). Made of cotton so compressed as to leave a hole running through the center, halfway down the length. Available nationally.

Tampax Junior (Tampax, Inc.). 98¢ for 40 (29.4¢). Absorbent cotton sheet, sewn down the middle, then crimped to final size. Available nationally.

Tampax Regular. Similar to Tampax Junior, above, but slightly larger.

Tampax Super. Similar to Tampax Junior and Tampax Regular, but slightly larger.

Cashay (Park & Tilford). Cost per doz., 33¢. Two cotton puffs, tied together with strips of gauze between. Tampon held together by a string drawn through each section and wrapped around in either direction. Available nationally.

ACCEPTABLE—CONT'D

Wix (Universal Prod. Corp.). Cost per doz., 45¢. Compressed absorbent cotton, with top wrapped in crepe paper. Center of tampon wrapped in a sheet of perforated cellophane, with string running half-way through plug, out bottom. Available nationally.

SHAVING SOAPS AND CREAMS

Cakes of shaving soap are "Best Buys" for economy.

An effective shaving preparation must first remove the natural oils surrounding the hair shafts, and then hold moisture around the hairs. In general, lathering preparations — marketed as cakes, creams, bowls, powders, sticks, liquids — seem to do this more effectively than brushless creams. The stable soap lather need not be worked up into a bulky mass, but should be sufficient to cover the beard completely.

The most important steps in getting a good shave are (1) to soften the beard properly, (2) to use a sharp blade and (3) to hold the razor so that its line of travel is not at a right angle to the edge of the blade, but at an angle that will give a partly slicing stroke. Don't rush through the beard softening process. Under most favorable conditions a minimum of two minutes is necessary for water to soak into the hair. Hot or warm water is preferable, and the face should be kept wet throughout the shaving period. Stretching the skin slightly may help you to get a closer shave.

Special claims (lubrication, hair support, antiseptic action, etc.) for various shaving preparations should be treated with skepticism.

SKIN BLEACHES

Many skin bleaches contain salicylic acid or related compounds. They may be irritating when improperly used, or when used by persons sensitive to these substances.

As a result of stringent regulations of the present Food and Drug Law, the once popular mercury bleaches are seldom found on the market. Bichloride of mercury, which is effective but dangerous, is prohibited in commercial skin bleaches in concentrations higher than 2%. Ammoniated mercury may still be used in amounts up to 5%, but clear warnings about possibilities of irritation, permanent skin discoloration and poisoning must appear on the label.

(Continued next page)

A mild surface bleach, such as hydrogen peroxide (3% reinforced with a few drops of ammonia), while less effective, is far safer than either the salicylic acid or the mercury type.

Freckle removers are merely skin bleaches intended to make freckles less conspicuous.

SUNBURN PREVENTIVES

A sunburn preventive forms a chemical screen which cuts out some of the burn-producing rays of sunlight. Since burn-producing and tan-producing rays are impossible to separate, the sunburn preventive must necessarily eliminate some of the tan-producing rays.

Vertical rays (as at noon) cause more severe burning or tanning than slanting ones; burning is more severe at high altitudes than at low. Smoky skies can absorb much of the burning (ultra-violet) rays, but brightness of the sun alone does not determine the intensity of ultra-violet rays. Light reflected from sand and water and the diffused light of a misty day can produce severe burns.

The best sunburn preventive cannot be a complete shield against the sun's burning rays. Neither does a beach umbrella or hat give complete protection, for these are no safeguard against reflected rays. To give maximum protection, a lotion must be reapplied every hour or so, and the coating must be renewed after every swim. Take care to apply the lotion evenly, or you will be left with a mottled tan.

Sunburn preventives are not sunburn cures. Once you have the burn, the preventive does no good.

There are three general types of sunburn preventives available.

The greaseless variety contains a sun-screen chemical in a base which evaporates soon after application, leaving an invisible protective film on the skin.

Preventives in which the screen is dissolved in oil are less popular. They may feel uncomfortable on the skin and tend to attract particles of sand and dust. However, the emollient effect may benefit dry skin.

Emulsions—thick, creamy lotions—have an emollient effect without being sticky. They are easy to apply evenly and, after some rubbing, leave very little greasy residue on the skin.

From the *Reports*, July 1942. Ratings included.

TALCUM POWDER

Talcum powder forms a protective coat over the skin, helping to prevent chafing. It absorbs moisture, and has a slight cooling effect, in that the surface of evaporation is increased by the many tiny surfaces of the powder particles. And the perfume besides having appeal in itself, acts as a slight mask for body odors.

The following brands are listed in order of increasing cost per ounce (given in parentheses) in terms of the most economical size of package available.

Try talcum powders from those at the head of the list; conduct your own "smell test" to determine which fragrance you like best.

From the *Reports*, October 1943.

BEST BUYS

In order of cost per ounce.

Lander's Sweet Pea. 10¢ for 13-oz. container (0.8¢).
 Carrel Gardenia. 10¢ for 9-oz. container (1.1¢).
 Floral Fragrance. 19¢ for 1-lb. can (1.2¢).
 Blue Diamond Apple Blossom. 21¢ for 1-lb. container (1.3¢). Available at Hearn's Department Store, NYC.
 Blue Waltz. 10¢ for 7-oz. can (1.4¢).
 Duchess of Paris Apple Blossom. 10¢ for 7-oz. can (1.4¢).

The Vogues of 1890 Sweet Pea, Sweet Jasmine, Spicy Apple Blossoms, Orchid and Orange Blossom, Lilacs and Roses. 10¢ for 7-oz. can (1.4¢).

Lander's Gardenia and Sweet Pea. 10¢ for 7-oz. can (1.4¢).

Homespun Spice. 10¢ for 7-oz. can (1.4¢).

Bouquet. 10¢ for 7-oz. can (1.4¢).

Barbara Lane Apple Blossom. 23¢ for 1-lb. container (1.4¢).

Fragrant Blossoms. 10¢ for 6½-oz. can (1.5¢).

Showers of Flowers. 10¢ for 6½-oz. can (1.5¢).

ACCEPTABLE

Floral Fragrance Sweet Pea. 10¢ for 6-oz. can (1.7¢).
 Blossom Time Honeysuckle. 10¢ for 6-oz. container (1.7¢).
 Vi-Jon Bouquet. 10¢ for 6-oz. container (1.7¢).
 Virginia Lee. 10¢ for 5½-oz. can (1.8¢).
 Cunningham Gardenia. 29¢ for 1-lb. container (1.8¢).
 Bloomingdale's Carnation. 28¢ for 14-oz. container (2.0¢).

(Continued next page)

ACCEPTABLE—CONT'D

Irresistible. 10¢ for 5-oz. can (2.0¢).

Loring. 33¢ for 1-lb. can (2.1¢).

Macy's Rose Scented. 32¢ for 15-oz. bottle (2.1¢).

Hall's Baby Talc. 35¢ for 1-lb. container (2.2¢).

Bouton Apple Blossom. 10¢ for 4-oz. container (2.5¢).

Laverne Woodmere Fragrance. 10¢ for 4-oz. container (2.5¢).

Vi-Jon Night in Shanghai. 10¢ for 4-oz. bottle (2.5¢).

CD. 45¢ for 1-lb. container (2.8¢).

Elizabeth Post Corsage Bouquet. 10¢ for 3½-oz. can (2.9¢).

Orange Blossom. 10¢ for 3-oz. container (3.3¢).

Laverne Apple Blossom. 10¢ for 3-oz. can (3.3¢).

Z.B.T. 21¢ for 5½-oz. can (3.8¢); 10¢ for 2-oz. can (5¢).

Cling. 10¢ for 2½-oz. can (4.0¢).

Mennen Borated Powder. 39¢ for 9-oz. container (4.3¢).

Walgreen's All-Purpose Talc. 39¢ for 9-oz. can (4.3¢).

Cashmere Bouquet. 19¢ for 4-oz. container (4.8¢); 10¢ for 2-oz. container (5¢).

Tayton's California Bouquet. 10¢ for 2-oz. can (5¢).

Colgate's Florient. 15¢ for 3-oz. can (5¢).

Johnson's Baby Powder. 21¢ for 4½-oz. container (5.1¢); 10¢ for 1¾-oz. container (5.7¢).

Park & Tilford No. 3. 10¢ for 1¾-oz. can (5.7¢).

Cuticura. 23¢ for 4-oz. can (5.8¢); 10¢ for 1 1/3-oz. can (7.5¢).

Spooner's Apple Blossom. 23¢ for 4-oz. bottle (5.8¢).

Squibb Bouquet. 23¢ for 4-oz. can (5.8¢).

Woodbury After Shave Powder. 21¢ for 3½-oz. can (6¢).

Camellia. 27¢ for 4½-oz. container (6¢).

Djer-Kiss. 23¢ for 3¾-oz. can (6.1¢); 10¢ for 1½-oz. can (6.7¢). Also available tinted.

Gentlemen's After Shaving Powder. 19¢ for 4-oz. can (6.3¢).

Mavis. 19¢ for 3-oz. can (6.3¢); 10¢ for 1½-oz. can or container (6.7¢). Also available tinted. Found short weight; cost per ounce based on weight found.

McKesson's Talc for Men. 25¢ for 4-oz. container (6.3¢).

Rexall Baby Powder. 25¢ for 4-oz. can (6.3¢).

Palmolive Talc for Men. 23¢ for 3¾-oz. can (6.4¢).

ACCEPTABLE—CONT'D

Colgate Talc for Men. 25¢ for 3½-oz. can (6.7¢).
Williams After Shaving Talc. 23¢ for 3-oz. can (7.7¢).
Pinaud Lilac Talc. 29¢ for 4½-oz. can (7.7¢). Found short weight; cost per oz. based on weight found.
April Showers. 39¢ for 5-oz. can (7.8¢); 10¢ for 1-oz. can.
Marvelous. 55¢ for 7-oz. container (7.9¢).
Lavender Talc. 25¢ for 3½-oz. can (8.0¢).
Ybry Femme de Paris. 50¢ for 6-oz. container (8.3¢).
Princess Pat. 25¢ for 2.85-oz. can (8.8¢).
Cheramy Gardenia. 19¢ for 2¼-oz. can (8.5¢), Sweet Pea, 20¢ for 2¼-oz. can (8.9¢).
Mimosa Bouquet Dusting Powder. 50¢ for 5-oz. container (10¢).
Elmo Honeysuckle Talc. 50¢ for 5-oz. container (10¢).
Luxor Carnation. 50¢ for 5-oz. container (10¢).
Three Flowers. 50¢ for 5-oz. container (10¢).
Yanky Clover. 50¢ for 5-oz. container (10¢).
Harriet Hubbard Ayer Pink Clover. 65¢ for 6-oz. container (10.8¢).
Azurea. 39¢ for 3½-oz. can (11.1¢).
Cappi. 50¢ for 4 2/5-oz. bottle (11.4¢).
No. 4711. 35¢ for 3-oz. can (11.7¢).
Tussy Tropical Spice. 50¢ for 4¼-oz. container (11.8¢).
Gemey, 28¢ for 2¼-oz. can (12.4¢).
Mountain Heather Talc. 50¢ for 4-oz. container (12.5¢).
Camellia Talcum. 50¢ for 4-oz. container (12.5¢).
Adrienne. 39¢ for 3-oz. can (13¢).
Talc L'Origan. 50¢ for 3.7-oz. can (13.5¢).
Houbigant Quelques Fleurs. 60¢ for 4½-oz. can (14.1¢).
Early American Friendship's Garden. 50¢ for 3½-oz. container (14.3¢).
Varva Nonchalant. 50¢ for 3¼-oz. container (14.3¢).
Cara Nome. 50¢ for 3½-oz. can (14.3¢).
Old Spice. 50¢ for 3½-oz. container (14.3¢).
Evening in Paris. 50¢ for 3¼-oz. bottle (15.4¢).
Mary Scott Rowland. 50¢ for 3¼-oz. paper container (15.4¢).
Varva Follow Me. 55¢ for 3½-oz. container (15.7¢).
Roger & Gallet Fleurs d'Amour. 49¢ for 3-oz. can (16.3¢). Blue Carnation, 50¢ for 3-oz. container (16.7¢).

(Continued next page)

ACCEPTABLE—CONT'D

Skylark. 50¢ for 3-oz. container (16.7¢).

Helena Rubinstein Apple Blossom. 50¢ for 3-oz. container (16.7¢).

Primrose House Forget-Me-Not. 50¢ for 3-oz. container (16.7¢).

Houbigant Fougère Royale After Shaving. 60¢ for 3½-oz. can (17.2¢).

Yardley Lavender. 55¢ for 3-oz. can (18.3¢).

Scherk Arabian Nights. 49¢ for 2¼-oz. bottle (22.2¢).

Lenthalic Tweed. \$1 for 4½-oz. bottle (22.2¢).

Lenthalic Bal Masque. 50¢ for 2-oz. container (25¢).

Kathleen Mary Quinlan Forget-Me-Not. 50¢ for 2-oz. container (25¢).

Charles of the Ritz. \$1 for 4-oz. container including puff (25¢).

Wrisley Pink Coral. 50¢ for 1¾-oz. container (28.6¢).

Du Barry. \$1.25 for 3⅓-oz. plastic container (32.3¢).

Lucien Lelong Opening Night. \$1 for 3-oz. bottle (33.3¢).

Ardena Dusting Powder Blue Grass. \$1.50 for 4½-oz. container including puff (33.4¢).

Prince Matchabelli Duchess of York. \$1.25 for 3¾-oz. bottle (36.8¢). Found short weight; cost per oz. based on weight found.

Charbert Lavender. \$1 for 2½-oz. bottle (40¢).

NOT ACCEPTABLE

Ammen's Powder. 25¢ for 4-oz. paper container (6.3¢). Contained starch.

TOILET SOAPS

The basic ingredients of soap are cheap; it is produced by the action of an alkali (like lye) on an animal or vegetable fat. High prices do not buy superior soaps.

Price, quality and sizes were frozen by OPA to stop price rises. Importation of coconut, barbassu and palm oil, which ordinarily constitute some 25% of the oils used in toilet soap, has been curtailed, and manufacturers must use substitutes. It is possible that substitutes will make soaps with less sudsing ability, but cleansing power is not likely to be impaired.

"Superfatted" soaps are less drying to some skins than ordinary soaps, but occasionally the free fatty acids they

contain are irritating. In any case it is better for a dry skin to be cleansed with ordinary soap and then softened with a lubricating cream. Where even this causes excessive drying, dermatologists generally recommend the use of cold cream alone.

The term "Castile" has little significance now, although it originally referred to a soap with a pure olive oil base. "Hard water soap" once meant soap made primarily from coconut or palm-kernel oil, which is more efficient than ordinary soap in hard water or in cold water. But the term is now applied to so many different products that it means little. "Hard water soap" and "all water soap" are synonymous terms.

Transparent soaps have no special advantage in purity or quality.

Extraneous and valueless soap ingredients, sometimes present, include buttermilk, oatmeal, cucumber, etc. "Cresylic acids," contained in *Lifebuoy* and similar soaps should not be used regularly on the skin, according to some dermatologists. Investigators have found that no ordinary soaps have germicidal properties. It is the accompanying scrubbing, along with the soap and water, which carry away the bacteria.

"Framed" soaps are made by running the liquid soap into molds and allowing it to harden in contact with air. They have high water content — up to 30% — when made, and usually cost less both to manufacturer and consumer than "milled" soaps. They are sometimes made "floating" by having air beaten into them before they harden.

Milled soaps are made by subjecting pulverized soap to great pressure, thus forming it into a hard cake. They contain no more than 10% water, are much harder and dissolve more slowly; hence they tend to be less wasteful.

Any soap is wasted if kept in a water-filled soap dish. Your soap dish should have a corrugated bottom or holes which allow water to drain off.

The soaps were tested by CU to see whether they conformed to Federal specifications for water content, free alkali, fillers and other inactive ingredients. Since all brands tested were within the limits of purity outlined in government specifications, they are rated in terms of cost per pound of dry soap, excluding water and inert material. Those near the top of the list may be considered the best values.

(Continued next page)

Prices vary considerably from place to place. You can sometimes make sizeable savings through soap "sales" and quantity buying. If you buy soap in quantity, unwrap the cakes and store them in a dry place. In this way excess moisture evaporates and the cake lasts longer.

From the *Reports*, October 1942; prices checked August 1943.

ACCEPTABLE

(*In order of increasing cost per lb. of dry soap—indicated in parentheses*)

Kirkman Beauty Bubbles. 10¢ for 3 cakes (16¢). Available nationally.

Colgate's Ajax Bouquet. 11¢ for 3 cakes (18¢). Available nationally.

Asco Hardwater. 13¢ for 3 cakes (20¢). Available at American Stores chain.

Ajax Floating. 13¢ for 3 cakes (19¢). Available nationally.

Kirkman Floating. 5¢ a cake (20¢). Available nationally.

Colgate's Floating. 11¢ for 2 cakes (20¢). Available nationally.

Eavenson's Bridal Bouquet (J. Eavenson & Sons). 4¢ a cake (20¢).

Ivory (Procter & Gamble). 6¢ a cake (21¢). Available nationally.

Co-op Floating (National Co-operatives). 21¢ for 4 cakes (21¢). Available nationally in Co-op stores.

Swift's Maxine Complexion Soap (Swift & Co.). 13¢ for 3 cakes (21¢).

CD Blue Label White Floating. 9¢ a cake (21¢). Available at Cooperative Distributors, NYC or by mail order.

Jergens Bouquet. 17¢ for 4 cakes (22¢).

Wrisley's Palm Oil. 5¢ a cake (22¢).

Swan. 6¢ a cake (22¢).

Kirk's Coco Hardwater Castile. 6¢ a cake (23¢).

Woolworth's Lanolated Cold Cream Soap (Woolworth Stores). 10¢ for 5 cakes (24¢).

Colgate's Beauty White. 7¢ a cake (24¢).

Halesworth (Hale Bros., San Francisco). 5¢ a cake (24¢).

Big Bath (Colgate-Palmolive-Peet). 17¢ for 3 cakes (24¢).

Williams Pine and Balsam. 4¢ a cake (24¢).

ACCEPTABLE—CONT'D

Octagon White (Colgate-Palmolive-Peet). 5¢ a cake (25¢).

Macy's Hard or Soft Water (R. H. Macy, NYC). 74¢ for a box of 12 cakes (25¢).

Fine Art Complexion (Armour). 5¢ a cake (25¢).

Ward's Cold Cream Facial (Montgomery Ward). Cat. No.—4246. 59¢ for box of 12, plus postage (25¢). Available by mail order.

Alure Complexion. 5¢ a cake (25¢). Available at Kroger Grocery & Baking Co. chain.

Jergens Lilac. 5¢ a cake (25¢).

Kirkman's Complexion. 5¢ a cake (26¢).

Fairsex (Colgate-Palmolive-Peet). 5¢ a cake (26¢).

Wrisley Pure Baby Castile. 5¢ a cake (27¢).

Sears' Gay (Sears-Roebuck). Cat. No. 4986. 33¢ for 6 cakes plus postage (27¢). Available by mail order.

Sweetheart. 19¢ for 4 cakes (27¢).

Apple Blossom (Colgate-Palmolive-Peet). 17¢ for 3 cakes (27¢).

Cologne Bouquet (J. S. Kirk). 5¢ a cake (27¢).

Gimbel's Hardwater (Gimbel Bros., NYC). 69¢ for a box of 12 (27¢).

Aimcee Palm and Olive Oil (Associated Merchandising Corp.¹). 69¢ for box of 12 cakes (27¢).

Colgate's Jasmin. 17¢ for 3 cakes (27¢).

Hudson White Floating (J. L. Hudson, Detroit). 29¢ for 4 cakes (28¢).

Aimcee Hardwater.¹ 79¢ for box of 12 cakes (28¢).

Colgate's White Rose. 17¢ for 3 cakes (28¢).

Colgate's Gardenia. 17¢ for 3 cakes (28¢).

Colgate's Charmis. 17¢ for 3 cakes (28¢).

Gimbel's White. 69¢ for box of 12 (28¢).

Colgate's Lilac Imperial. 17¢ for 3 cakes (28¢).

Colgate's Orchis. 17¢ for 3 cakes (29¢).

CD Fashion Cold Cream Soap. 6¢ a cake (29¢). Available at Cooperative Distrib., NYC or by mail order.

Colgate's Lily of the Valley. 17¢ for 3 cakes (29¢).

Gimbel's Palm. 69¢ for box of 12 (29¢).

Williams Lavender. 5¢ a cake (29¢).

Colgate's Peter Pan. 18¢ for 3 cakes (29¢).

Colgate's Carnation. 18¢ for 3 cakes (29¢).

Colgate's Coleo. 17¢ for 3 cakes (29¢).

ACCEPTABLE—CONT'D

Penney's Cold Cream Hardwater (J. C. Penney Stores). 29¢ for box of 6 (30¢).

Jergens Transparent Violet. 5¢ a cake (30¢).

Colgate's Violet. 18¢ for 3 cakes (30¢).

Aimcee White Floating.¹ 79¢ for box of 6 (30¢).

Jesco White Floating (J. Eavenson). 21¢ for 3 cakes (31¢).

May Company's TMC (May Co., Los Angeles). \$1.19 for box of 16 (31¢).

Gayla Beauty Soap (Wrisley). 17¢ for 3 cakes (31¢).

Faircrest Hardwater (The Fair, Chicago). 7¢ a cake (31¢).

Hudso Lilac. 29¢ for 4 cakes (32¢).

Co-op Pine Scented-Sauna (National Co-operatives). 10¢ a cake (32¢).

Bullock's (Bullock's, Los Angeles). 90¢ for 15 (32¢).

Co-op Palm and Olive Oil (National Co-operatives). 6¢ a cake (32¢).

Co-op Cold Cream (Eastern Co-op Wholesale). 6¢ a cake (32¢).

Aimcee Jasmin Bath Tablet.¹ \$1.00 for box of 12 (32¢).

Fairy (Lever Bros.) 5¢ a cake (32¢).

Lifebuoy Health Soap (Lever Bros.). 7¢ a cake (32¢).
See statement on *Lifebuoy* in text.

Hudso Hardwater. 29¢ for 4 cakes (33¢).

Lux (Lever Bros.). 7¢ a cake (34¢).

Faircrest. \$1.00 for box of 12 (37¢).

Superfatted Facial (The Fair, Chicago). \$1.00 for box of 12. (37¢).

Whelan's Salon Soap Superfatted Lanolin (Whelan Drug Stores). 47¢ for box of 6 (39¢).

Faircrest Pine (The Fair, Chicago). 25¢ for 3 cakes (40¢).

Palmolive. 8¢ a cake (41¢).

Williams Lanolin. 9¢ a cake (41¢).

Ward's Olive Oil Castile. (Montgomery Ward). Cat. No. 4651. 33¢ for 3 cakes plus postage (42¢). Available by mail order.

Macy's Apple Blossom (Macy's NYC). \$1.09 for box of 12 (42¢).

Emporium's Charm House—Carnation (The Emporium, San Francisco). 39¢ for 4 cakes (44¢)

¹ For a list of AMC stores, see page 10.

ACCEPTABLE—CONT'D

Jergens San Remo Baby Castile. 10¢ a cake (44¢).
 Woodbury Facial. 5¢ a cake (44c).

Colgate's Cashmere Bouquet—small size, 17¢ for 3 cakes (57.1¢). Large size, 27¢ for 3 cakes (45¢).

Camay (Procter & Gamble). 9¢ a cake. (48¢).

Stanley's Baby Castile. 10¢ a cake (48¢).

Aimcee Oval Bath.¹ 75¢ for box of 3 (49¢).

Jap Rose (Procter & Gamble). 10¢ a cake. (50¢).

Luxor's Savon Sachet Apple Blossom (Armour & Co.).
 —25¢ a cake (56¢).

Walgreen's Leon Lorraine Superfatted Soap (Walgreen Drug Stores). 19¢ a cake (60¢).

Physicians' & Surgeons'. 9¢ a cake (66¢).

Pear's Transparent (Lever Bros.). 13¢ a cake (71¢).

Hershey's Rose Garden. 40¢ for box of 3 (73¢).

Field's Floral (Marshall Field). 25¢ a cake (79¢).

Bathasweet Garden Bouquet. 35¢ a cake (84¢).

Conti Castile. 10¢ a cake (92¢).

Genovese's Madre Baby Castile (Genovese Drug Stores).
 29¢ a cake (96¢).

Americice Cold Cream-Almond (Marshall Field, Chicago).
 50¢ a cake (\$1.17).

Helena Rubinstein's Apple Blossom. 50¢ a cake (\$1.84).

Spring Rain (Charles of the Ritz). 50¢ a cake (\$1.88).

Yardley Old English Lavender. 35¢ a cake (\$2.05).

Frances Denney's Wild Rose. 50¢ a cake (\$2.26).

Savon Fleurs D'Amour (Roger & Gallet). 40¢ a cake
 (\$2.26).

Cara Nome. 50¢ a cake (\$2.49).

Dorothy Gray. 75¢ a cake (\$2.51).

Tweed (Letheric). 50¢ a cake (\$2.82).

Elizabeth Arden June Geranium Bath. \$1.00 a cake
 (\$3.23).

Quelques Fleurs (Houbigant) 50¢ a cake (\$3.47).

TOILET TISSUES

The quality of toilet tissue depends in general on the proper balance of strength, absorbency and softness of the paper. A stronger sheet, slightly less absorbent, is preferable to a highly absorbent one where strength has been sacrificed. In some cases, strength is obtained by using soft, highly absorbent sheets in double or triple layers.

¹ For list of AMC stores, see page 10.

(Continued next page)

284 TOILET TISSUE

Thickness, weight, strength, amount of moisture absorbed and speed of absorption were tested and given balanced consideration in the ratings.

Too rapid absorption is undesirable, since wet paper becomes weak. In testing, absorption was measured before and after an "aging" process. This simulated the maximum deterioration in absorbency that storage for six months would cause.

None of the papers tested revealed splinters or serious impurities. Softness was not rated, because it is a matter of personal preference.

Unless otherwise indicated, prices given are for 1000 sheets, 4½ x 5 inches.

From the *Reports*, June 1942.

BEST BUYS

The following toilet tissues were considered to offer the best value for the money in the order given.

Pacific Crepe Tissue. 4¢. 650 sheets. Cost per 1000 sheets, 6.1¢. Available in A&P stores. A stronger, better and more absorbent paper than *Pacific Soft Crepe Paper*, also sold in the A&P stores.

Princess. 8¢. Available at American stores.

Red Cross (A.P.W. Paper Co.). 6¢. 4½" x 4½". Available nationally.

Sears' Challenge Cat. No.—841 (Sears-Roebuck). 7¢ plus postage. 4½" x 4½". Available by mail order.

ACCEPTABLE

(In approximate order of quality without regard to price)

Pacific Crepe Tissue (see "Best Buys").

Scot (Scott Paper Co.). 9¢. Available nationally.

Princess (see "Best Buys").

Testmark (Tested Papers of America). 10¢. Two-ply. Available nationally.

Aimcee (Associated Merchandising Corp.¹). 15¢. Two-ply: 500 sheets.

CD (Cooperative Distributors, NYC). 10¢. 4½" x 4¾". Two-ply. Available at Cooperative Distributors, NYC or by mail order.

Sitroux (Sitroux Co.). 10¢. 900 sheets. 4½" x 4½". Cost per 1000 sheets, 11.1¢. Two-ply.

Lin-Tex (Regal Paper Co.). 5¢. 650 sheets. 4½" x 4½". Cost per 1000 sheets, 7.7¢. Sides of roll not covered by wrapping, permitting soiling.

¹ For a list of AMC stores, see page 10.

ACCEPTABLE—CONT'D

Soflin (National Retailer-Owned Grocers). 8¢. 4½" x 4½".

Hazel (National Tea Co., Chicago). 5¢. 650 sheets. 4½" x 4½". Cost per 1000 sheets, 7.7¢.

Lexington (Bloomingdale's, NYC). 15¢. Two-ply.

Sears' Challenge (see "Best Buys").

Red Cross (see "Best Buys").

Delsey (International Cellucotton Products Co.). 10¢. 720 sheets. Cost per 1000 sheets, 13.8¢. Two-ply.

Hearn's Twin Tissue (Hearn's, NYC). 12¢. 4½" x 4½". Two-ply.

Plaza All-Purpose (Bloomingdale's, NYC). 15¢. Two-ply.

Co-op Facial Quality (Eastern Cooperative Wholesale). 9¢. 4½" x 4½". Two-ply. Available at Co-op stores.

Supersoft (Red & White Stores). 3 rolls for 25¢.

Colonial Tissue (Pender Stores). 8¢. Two-ply.

Co-op Red Label (Eastern Cooperative Wholesale). 8¢.

Venida (Rieser Co.). 10¢. 500 sheets, 4½" x 9", which is equivalent to 1000 sheets of 4½" x 4½", but the larger than average sheets tend to promote use of more paper. Three-ply.

Sears' Approved Cat. No.—837 (Sears-Roebuck). 12 rolls for 97¢ plus postage.

Blue & White (Red & White Stores). 7¢. 4½" x 4½".

Ward's Fashion Cat. No.—4331 (Montgomery Ward). 6¢ plus postage. 650 sheets. 4½" x 4½". Cost per 1000 sheets, 9.2¢.

Séda (Gotham Tissue Corp.). 10¢.

Pacific Soft Crepe Paper (A&P Stores). 4¢. 650 sheets. 4½" x 4½". Cost per 1000 sheets, 6.1¢. Inferior to A&P's *Pacific Crepe Tissue*, sold at the same price.

Super-Soft (Hearn's, NYC). 12¢.

Waldorf (Scott Paper Co.). 5¢. 650 sheets. Cost per 1000 sheets, 7.7¢.

Co-op Blue Label (Eastern Cooperative Wholesale). 6¢. 4½" x 4½".

United Whelan (Whelan Drug Stores). 5¢. 600 sheets. 4½" x 4½". Cost per 1000 sheets, 8.3¢. A heavier, thicker and slightly stronger sheet than *United Cross* below, but with much poorer absorptive qualities.

Ward's Puff Cat. No.—4333 (Montgomery Ward). 3

ACCEPTABLE—CONT'D

rolls for 14¢, plus postage. 650 sheets. $4\frac{1}{4}$ " x $4\frac{1}{2}$ ". Cost per 1000 sheets, 7.7¢.
Macy's Duosoft (R. H. Macy, NYC). 15¢. Two-ply.
Richmond (First National Stores). 5¢. 650 sheets. Cost per 1000 sheets, 7.7¢.
Soft Spun (Stevens & Thompson Paper Co.). 9¢. $4\frac{1}{2}$ " x $4\frac{1}{2}$ ".
United Cross (Whelan Drug Stores). 8¢. Number of sheets not stated on label; approximate count, 900. $4\frac{1}{2}$ " x $4\frac{1}{2}$ ". Cost per 1000 sheets, 8.8¢.

Ward's Deluxe Cat. No.—4334 (Montgomery Ward). 10¢. Two-ply.

Gimbel's (Gimbel Bros., NYC). 8¢.

Color-Tex (S. S. Kresge Stores). 8¢. Number of sheets not stated on label; approximate count, 600. Cost per 1000 sheets, 13.3¢. Sides of roll not covered by wrapping, permitting soiling.

NOT ACCEPTABLE

The following brands were rated "Not Acceptable" because they showed poor strength or poor absorptive qualities.

Hearn's Blue Diamond. 10¢. $4\frac{1}{2}$ " x $4\frac{1}{2}$ ". Tests showed general deterioration in quality.

Herald Square. 10¢.

Texlin. 10¢. 750 sheets. Cost per 1000 sheets, 13.3¢. Sides of roll not covered by wrapping.

Petal Soft. 10¢. $4\frac{1}{2}$ " x $4\frac{1}{2}$ ". Two-ply.

Endura. 10¢. $4\frac{1}{2}$ " x $4\frac{1}{2}$ ".

Planet. 7¢. $4\frac{1}{2}$ " x $4\frac{1}{2}$ ".

TOOTH BRUSHES

Although the old maxim, "a clean tooth never decays," is no longer generally accepted by the dental profession, it is certain that proper tooth brushing can be of aid in preventing and curing certain diseases of the gums and in helping prevent tooth decay.

There is difference of opinion as to whether a dentifrice is necessary. The consensus is that it may help the brush somewhat to clean the teeth, and that it has a pleasant taste and odor, which makes the whole process more enjoyable and hence more apt to be done, but that it cannot prevent or cure gum disease or prevent decay (see "Dentifrices," page 214).

After brushing, rinse the mouth vigorously, to remove

any particles dislodged by brushing. Dental floss, used once a day, will remove particles which brush and rinsing have failed to remove. Pass an inch or so of the floss between each pair of teeth, holding it tightly against one tooth, so as to avoid snapping the floss against the gum.

Use a brush with a straight handle, and tufts of equal length. The bristles should be cut so that each tuft tapers to a point. Spaces between the tufts should be slightly less than the widths of the tufts themselves.

Nylon and Exton bristles are not considered quite so good as natural bristle brushes, but the latter are increasingly difficult to obtain. If you can't find the recommended style in a natural bristle brush, you will have to make the best of synthetic fibers, but be sure that the brush is made as specified above.

Dentists do not agree as to the advisability of hard bristles, but the consensus favors a medium bristle brush. It will keep the teeth clean and give the gums sufficient massage without the danger of injuring the gums. Soft or poor quality bristles soon lose their resiliency and become inefficient. Brushes with curved surfaces, or with one or more extra-long tufts, are not generally suitable.

Electrically driven brushes should not be used; even at best they can brush teeth no more effectively than the hand manipulated brushes.

Ask your dentist to show you how to brush your teeth. Newer methods are intended both to cleanse teeth and massage gums.

Household Equipment & Supplies

The price of house furnishings edged up 2.2% from September, 1942 to September, 1943, according to the Bureau of Labor Statistics. But there were significant increases in furniture prices as well as considerable quality depreciation. The increasing shortage of lumber is creating pressure on furniture prices and new increases can be expected in 1944.

Some metal is being given manufacturers of beds and bed springs, since the wooden war models proved unsatisfactory. But prices of beds and mattresses are high and quality is below par.

Good carpets and rugs are scarce and will remain so until the end of the war. In 1943, only 15% of the amount of floor coverings produced in 1941 was manufactured. There is a critical shortage of materials used for backing so that manufacturers are unable to utilize their limited quotas of carpet wool.

Cutlery is becoming scarce, but in 1944 a larger supply of standardized models will be available. Some metal will also be used for the manufacture of garbage pails and kitchen ware like skillets, kettles and flat irons. Glass and enamel-ware are substituting for aluminum pots and pans.

It is becoming increasingly difficult to obtain repairs and parts for refrigerators, radios and electrical appliances which are no longer being made. Light bulbs and radio tubes are harder to get, although the situation may be eased in 1944 by Government allocation of materials for the use of civilians.

BEDSPRINGS AND MATTRESSES

Try to make your old bedsprings and mattresses last until the war is over. Current production is limited and the amount of metal permitted to be used in bedsprings is restricted by WPB order.

The mattresses being manufactured for civilian use are mainly of cotton felt. Innerspring mattresses are not being made at all, and hair mattresses are exceedingly scarce. Most of the domestic cattle hair is being used in bedding for the armed forces, and lack of shipping space

has sharply curtailed the supply of South American horsehair.

Grades of cotton felt depend on the lengths of the cotton fibers which are felted together and on the amount of impurities (sand, grit, grease, etc.) present. Better grades of cotton felt mattresses are made from long-staple cotton or first-run linters, but there is a shortage of these. Don't buy unfelted cotton mattresses.

Most States have laws requiring labels on bedding and sterilization permits for use of second hand material. Where there is no guarantee printed on a tag fastened to the mattress, consumers should demand a written guarantee from the dealer that the contents are new and clean.

Your springs and mattresses can often be made nearly as good as new at relatively small cost. Often an uncomfortable innerspring mattress or bedspring merely needs to have its springs tied. If you have a good quality hair mattress that has lost its resilience or has become "lumpy," for \$8 or so (depending on the size of the mattress) you can have it cleaned, sterilized and remade, and the result will probably be a far better mattress than is being manufactured today.

CAN OPENERS

If you need a can opener this year, you may have to take whatever style you can find, but in case you have your choice of several types, the following information will help you to make a selection.

Mechanical can openers are generally superior to the old-fashioned knife type, which is difficult to use and the cause of many a cut hand.

A good can opener should be durable, safe, easy to use and so constructed that, in cutting, a minimum amount of metal slivers are deposited in the can. It should open all types of cans—round, square, and beadless (evaporated-milk cans). For the last only the *Edlund* among the popular brands will work.

The cheapest are the hand types, generally costing from 10¢ to 50¢. Because of their low cost they may be good buys. But the best types are those which can be mounted on wall or table.

CARE OF WOOD FURNITURE

Too frequent application of polish may ruin the finish of wood furniture. Good practice is to wash the furniture twice a year, polish it twice a month.

To wash furniture, wet a pad of cheesecloth or old muslin, rub off any neutral soap and wash the surface with foamy suds. Wipe clean with a moist (not wet) rag and dry with a soft cloth.

The following formula will make a good polish, much cheaper than most commercial brands and as effective: cider vinegar—10 oz.; turpentine—10 oz.; mineral oil (paraffin oil, which can be bought cheaply in paint stores, will do)—10 oz.; denatured alcohol—2 oz. Shake well before using, and keep tightly corked in a cool place. The solution should last more than a year.

To apply, pour a little polish onto a slightly dampened piece of clean cheesecloth. Pass lightly over the furniture, following the grain of the wood. Do only a small section at a time on large pieces. Polish the surface immediately with a clean, dry cloth. Be careful to rub with the grain and to remove all *excess polish*.

Never allow polish or oil to stand on furniture, and never use harsh cleansing agents such as scouring powders, steel wool, lye or household bleach. Don't place a piano or any veneered furniture near windows or radiators or any damp place.

Surface scars: A scar can often be removed at the time it is made, but it may become permanent if neglected.

If alcohol or perfume is spilled on furniture, soak up the liquid at once, rub the area briskly with your dry finger tips and wipe on some camphorated oil.

Hot-dish marks may be removed by applying turpentine, which will penetrate the surface and restore the color of the stain without affecting the finish. Then rub the spot with boiled linseed oil and finally with polish, each on a clean cloth.

Water spots on shellacked furniture can be removed by treating first with a cloth dipped in hot vinegar, then with camphorated oil. For varnished furniture, use ammonia water, then furniture polish. If lacquered furniture develops water spots, the condition is serious, because water has probably seeped through and dried beneath the finish.

Scratches may be made inconspicuous if they are not too large or deep. First make sure that no slivers remain in the scratch. An ordinary textile dye that matches the color of the wood can be bought in drugstores or 5&10¢ stores. Mix it with water until the desired shade is achieved (test by dipping the end of a blotter into the solution; the proper shade is just a little lighter than the finish). Apply with the end of a toothpick in successive applications, waiting until each coat is dry before applying another, until the scratch matches the rest of the finish. If the scratch is deep, or if you want a perfect finish, however, it is best to give the job to an experienced furniture polisher.

Imprints of crocheted or woven mats can be avoided by placing cellophane between the mat and the finished surface.

FLASHLIGHT BATTERIES

In the past CU has stressed the importance of buying only dated flashlight batteries. This advice still holds true, if dated batteries can be found.

Beware of batteries dated 18 months ahead, instead of the standard 12.

Any cell should be removed from your flashlight as soon as it is exhausted, to prevent corrosion of the flashlight.

War restrictions have cut battery production, but supplies should be adequate for necessary use. Don't stock up on batteries. They deteriorate rapidly.

From the *Reports*, May 1942.

CLEANERS — KITCHEN AND BATHROOM

As this goes to press, tests on household cleaners are under way. Results will be published in the *Reports* early in 1944.

HOW TO CUT FUEL CONSUMPTION

1. Fit the window of every heated room with a tight-fitting storm window. Put a tight-fitting storm door, preferably with a vestibule arrangement, over every door leading to the outside of the house. (See Weatherproofing, page 296.)

2. If windows are loose, tighten them by resetting the inside wooden strips against which the windows slide. A snug-fitting window can be made to slide more easily by applying soap or wax.

3. Don't use any more heat than is needed for health and comfort. Heat your house to not more than 68 degrees. Keep the heat turned off in seldom-used rooms, and in bedrooms. Don't waste fuel by sleeping with the bedroom windows open and the heat turned on.

4. If you have a steam boiler, with or without a jacket, have it insulated with a two-inch covering of "85% magnesia" blocks cemented in place with asbestos. Or else use a two-inch layer of rock wool. In addition, make sure that all basement heating pipes are properly covered by insulation in good condition.

5. If the chimney draft seems to be excessive, have it tested with a draft gauge. If it is excessive, install an automatic smoke pipe draft regulator. It costs only a few dollars, and you can probably install it yourself.

6. One of the best ways to save fuel is to make the most-used rooms easy to heat. This is especially true if the system is regulated by a thermostat in one of these rooms. Additional radiators or larger radiators (perhaps moved from rooms not heated) may be installed in the room in which the thermostat is located or the most-lived-in room. With an automatic system, this can reduce fuel consumption by as much as 25% with adequate heat in living room and dining room. There will, of course, be less heat in other parts of the house.

Owners of automatic one-pipe steam heating plants (the radiators have vent valves which permit air to escape as the radiators heat up) can save fuel by having a second radiator vent valve installed in every radiator located in the most important rooms, including the room with the thermostat. Radiators heat faster when the air escapes from them twice as fast. This saves fuel by stopping the oil burner or banking the coal fire sooner than it would otherwise; and by providing less heat for the radiators not double-vented. Vent valves from radiators which are turned off, in unheated rooms, may be used for the double venting.

From the *Reports*, February 1943.

HEATING WITH COAL

With any type of coal system, maximum economy demands that the system be kept clean and in good repair. Here are the things to do:

First, with the aid of a wire brush, you can remove the

accumulated soot from the metal surface between the firebox and the water or air chamber.

Then clean the smokepipe (the pipe running from the furnace or boiler to the chimney). Pull the end joints apart. If the metal inside is not badly corroded and there are no holes, brush it out and put it back. If one or more sections need replacement, get new ones (be sure you know the exact size) from a tinsmith.

Examine the chimney by inserting a mirror at the proper angle inside the clean-out door at its base. Use a flashlight if necessary. If your chimney is clogged with soot, you may need expert help. Don't undertake the job yourself unless you have the necessary ladders, are used to using them, and have a safe perch on the roof near the chimney. If you feel safe in going ahead, wrap a cobblestone in several thicknesses of burlap or other coarse fabric, tie it securely to a long rope, and raise and lower it inside the chimney a few times, scouring the sides.

Then build a small fire, and when it's going well, add green vegetation or other smoke-producing material. Cover the chimney opening to make it reasonably airtight and see if smoke is leaking anywhere in the system.

Leaks in the boiler can be patched with furnace cement which can be bought in a hardware store. Poorly fitting doors (look at the ash pit door, too) and dampers can often be adjusted by filing off rough spots. Holes or cracks in the smoke-pipe mean that the defective portion should be replaced. Small leaks along the chimney can easily be fixed by a repairman. Extensive leakage usually means that the chimney requires relining.

If a sealing job doesn't result in a good draft, you'll probably need an expert's attention to your flue and smokepipe.

If yours is a hand-fired coal furnace, the following suggestions on how to tend the fire will help you get maximum heat at minimum cost:

1. Burn the smallest, least expensive coal (pea, egg, stove, nut, in order of increasing size) which will give good heating. Use larger sizes only to produce heat quickly in the morning, then use the small coal during the daytime and for banking.

2. Keep plenty of coal in the grates at all times. When adding fuel, fill up the firebox to the level of the bottom

of the firing door in front, and to a few inches above this in back. Good dampers should enable you to regulate the amount of heat.

3. When you add fresh coal to the fire, leave glowing coals exposed somewhere in the firebed to help ignite combustible gases released by the fresh coal.

4. Never bank the fire by leaving the firing door open. If you can't bank without opening the door, there's something wrong with the dampers.

5. Shake the grates only enough to cause a scattering of live coals to appear in the ash pit.

6. Don't disturb the firebed too much with shaker bar and poker; this wastes coal and may cause clinker trouble, especially if you use bituminous coal.

● ANTHRACITE STOKERS

If you have an anthracite stoker with automatic ash removal, it should be so adjusted that it deposits 25% to 35% of unburned coal along with the ash. Though this may appear to be wasteful, a stoker which does this gives the greatest efficiency and lowest fuel bills.

OIL HEATING

The difficulty of getting enough oil for heating in many parts of the country makes fuel conservation a matter less of economy than of comfort and health. The conservation job has two separate parts: home insulation and getting increased efficiency out of the heating system. The first part is covered under "Home Insulation" (page 296). Large increases in oil burner efficiency are usually possible because the average burner unnecessarily wastes a considerable part of the heat available in the fuel.

If you can afford the services of a competent combustion engineer, it will probably pay you to hire one to inspect your plant and have necessary changes made. But don't call in an ordinary service man and give him a free hand. There is a good chance that what he does will be both costly and useless. If you call in a service man and give him specific instructions as to what you want, however, there is a good chance—if you have a pressure atomizing burner—that you can get from 15% to 35% more heat from each gallon of oil, at a cost that should be less than 20 or 25 dollars.

CU's advice on what you should have done is based

upon extensive field study, with hundreds of comparisons of the efficiencies obtained from domestic oil burners adjusted the usual way and from burners adjusted the proper way.

These are the things to have a service man do:

1. Install the smallest size nozzle that will carry the heating load. This is likely to be a size smaller than the nozzle used normally.
2. Reduce the size of the firebox to make it fit closely the smaller flame given by the smaller nozzle. Do not do this by standing firebrick in place loosely; build a good small firebox by cementing the bricks properly in place.
3. Clean the boiler or furnace thoroughly, removing all soot and scale by using wire flue brushes and, if one is available, a special vacuum cleaner for boiler cleaning.
4. Locate and seal any "air leaks" in the boiler or furnace. A candle flame may be used to locate these; furnace cement is commonly used for sealing them. Air leaks permit cold air to enter and chill the boiler or furnace.
5. Adjust the smokepipe draft regulator for the minimum draft for which it can be set, and observe the operation of the oil burner, starting and stopping it and studying it while it runs. Adjust for higher smokepipe draft only if the minimum draft gives trouble. The proper draft to use is the very lowest which will give no soot, smoke, or odors in the house, and which will permit proper burning of the oil.
6. As the final adjustment for the oil burner, close the air damper of the burner so far that there is slight, barely perceptible, smoke coming from the top of the chimney with the firebox red-hot, after the burner has operated for at least 15 minutes continuously. Give the flame enough air to eliminate this slight smoke only if this is necessary to avoid trouble.

The reason for the installation of a smaller nozzle is that the nozzles on most burners give flames that are wastefully oversize. The large flames make it possible to heat the house up quickly — but this is a costly convenience, because a larger flame sends a larger percentage of its heat up the flue instead of into the boiler. With oversize flames, furnaces or boilers lie idle about half the time even on the coldest days, and are overworked greatly at such times as the burners do operate. To save

oil, your boiler or furnace should work most of the time on severely cold days (as it would if you were firing coal). With the proper size fire, which is considerably smaller than service men customarily install, your oil burner may operate steadily for two to four hours on sub-zero mornings. The heat won't come up as quickly mornings after being lowered for the night, and you won't be able to raise the temperature of the house from 65° to 68° or 70° quite as quickly as you were able to in the past. But you will save a great deal of the heat which your old, oversize flame used to send up the chimney, and on top of this you will gain an increase in efficiency because your oil burner does not start and stop as frequently as it did before.

Often more even heating is gained by using a considerably smaller flame, for instead of the radiators' heating and cooling several times on severely cold mornings, they remain just warm enough all morning, with the oil burner operating steadily or just stopping once in a while for a few minutes. For a five- or six-room house which has a warm-air or hot-water heating plant and in which some rooms are unheated and others kept at low temperatures, a firing rate as low as one gallon of oil per hour may be enough (as the minimum); one and one-half gallons per hour may be used for a small house if really necessary. The objective is to have the oil burner operate from fifteen to eighteen hours on the coldest days.

Do not install a nozzle too small to heat the house properly on coldest days, but be sure to install a nozzle no larger than is necessary!

From the *Reports*, February 1943.

HOME INSULATION

Despite wartime limitations, a great deal can still be done to cut heat losses in an existing house. The main losses are through roof, walls, windows and doors, and cracks, and all of these points need attention.

● STORM WINDOWS AND DOORS

Storm windows offer one of the most efficient ways of cutting heat losses in the average house. In tests at the University of Illinois, fuel consumption was cut 20% by the application of tightly fitting storm windows without reducing indoor temperatures. If it is not possible to put storm sashes on all the windows, they should at least

be applied to windows on the side of the prevailing Winter winds — generally the North and East sides of the house. Weatherstripping should be applied to the other windows.

Storm doors, while less important than storm windows, are also helpful in cutting down heat losses. They are most effective when combined with a small vestibule between the inner door and the storm door.

Storm windows and doors should be made by an expert so that they will fit tightly. The homeowner may be able to handle the seasonal hanging and removal, however. Hang storm windows from the top of the frame by means of hangers sold for the purpose. This makes it possible to prop them open for ventilation.

● WEATHERSTRIPPING

Weatherstripping of doors and windows is one of the cheapest ways to conserve fuel. Flexible felt strips, almost the only plentiful type, are the cheapest and the easiest to apply.

Attach the strips with small trunk tacks or carpet tacks (preferably rustproof). Close and lock windows and doors before applying weatherstripping.

Windows: Upper sash — attach stripping to outside of frame adjoining the sash. Before driving in the tacks, make sure that the contact edge of the strip presses snugly against the sash at all points. One piece of flexible strip can be used for the whole upper sash if carefully fitted into the corners.

Lower sash — weatherstrip from inside, using four separate pieces of stripping. Tack side strips to the face of the inside stop bead adjoining the sash, with the contact edge pressed against the face of the sash. Extend these strips from the top face of the inside sill to the top of the meeting rail. Tack piece across meeting rail to top of lower sash, with the contact covering the crack where sash rails meet. The piece will probably have to be in two sections to allow for the window lock. Across the bottom of the window, tack strip to the face of the sash, with contact edge pressing against the inside window sill.

Doors: Tack one length across bottom of door at the inside face with contact edge down, pressed firmly against the threshold. If threshold is too worn to give

tight fit, replace it before putting on stripping. A second length for sides and top is attached to door stops at the outside, with contact edges pressed firmly, though not too tightly against the face of the door.

Treat casement windows like doors, but on double ones put an additional strip along the inside face of the center crack.

A piece of weatherstripping along the bases of bedroom doors will prevent cold air from open windows from circulating through the rest of the house.

A very temporary and makeshift job of weatherstripping can be done in a few minutes by sealing cracks around a window with cellulose tape or other gummed tape. This is, however, only a temporary stop-gap.

In old houses, where cold air leaks through cracks around windows and door frames, or through cracks in the outer walls, caulking may be necessary. Caulking is simply the filling of cracks with a plastic substance which hardens on standing. If you want to do the job yourself, you can rent a caulking gun and buy the necessary materials from a hardware or paint store.

● ROOF & WALLS

Proper application of weatherstripping, caulking and storm windows and doors can save up to 25% fuel in the average house. Up to 25% more can be saved by more drastic measures, including roof and wall insulation. While roof and wall insulation are relatively costly, in cold climates they save enough to pay for themselves in a few years. The place to start is in the attic.

The job is simplest in an unused and unfinished attic. Here the ceiling beams of the floor below are usually open, with some sort of catwalk arrangement across them. Insulation is fairly easy to apply and the home owner should have no trouble in doing it himself. (But don't step off the cat-walks or the beams; if you do, you may not only damage the ceiling of the room below, but you may break a leg as well.)

If you plan to use loose fill insulation, the first step should be to set up a "vapor barrier." This is important, for moisture as well as heat passes through from the floor below, and both must be kept out of the attic. The most practical material for a vapor barrier is a layer of

asphalt-treated paper, laid over the ceiling beneath. Asphalt paper suited to the purpose is sold in rolls. In applying the paper keep in mind that the object is to provide an unbroken barrier over the ceiling. If you have to do any cutting and patching, remember to leave plenty of overlap, securely tacked down.

Loose Fill-Type insulation is poured into the panlike spaces between the beams, over the asphalt paper. All you have to do is pour out the material from the bags in which it is packed, and cover the attic floor, over the vapor barrier, to a uniform depth. (More detailed instructions are given on the containers.) In applying insulation of this type, be sure to block off all openings from the wall studs to keep air in spaces between wall studs from escaping up to the attic.

Blanket-Type insulation, in which the insulating material is sandwiched between two layers of treated paper, can be used instead of the loose fill type. It is sold in various widths, to fit different spaces between the beams, and in one-inch to four-inch thicknesses. With this type of insulation, a separate vapor barrier is not usually necessary. Usually the insulation is already covered on one side with vapor-resistant material. Be sure that this vapor-proofed side is laid next to the ceiling laths. Read the instructions carefully before applying, and follow them closely, to make sure that you get tight connections against the beams and at the eaves.

Batt-Type insulation is a variation of the blanket type. It differs from the latter only in that it is cut into smaller sections. On some types of ceiling construction, it is easier to apply.

Although insulating a finished attic is no more difficult from the heat-saving point of view than doing an unfinished one, there is the additional problem of maintaining good appearance in the finished room. It may, therefore, be a good idea to have such insulation done by a professional.

The type of insulating material to be used will depend on several factors. If you are just finishing off the attic, batt- or blanket-type insulation can be tacked between the studs and rafters, following the methods discussed for insulating unfinished attics. When this is done, the interior finish of plaster or of composition boards can be ap-

300 INSULATION

plied directly to the studs or rafters.

An alternative is to use composition boards made of insulating material like *Celotex* or *Insulite* for finishing. If this is done, the thickness of the batting behind them can be considerably reduced.

A third method is to dispense with batting and blanket insulation entirely, using a double thickness of insulating board for the wall. These boards may be left unfinished, or they may be papered or painted. If they are to be finished, a good plan is to use a treated wall paper or a special oil paint which will add to the vapor resistance of the boards. In any case, the secret of a satisfactory job of board insulation is to have all joints tight. See that manufacturers' instructions are carefully followed in this respect.

Insulation around an existing attic room may offer special problems. In many cases, the obvious method is to have loose fill material blown in from the outside. This requires special equipment, and can be done only by an expert. Usually such a job is expensive, and it is worth making a careful investigation first, to see whether other types of insulation are impossible to use.

The ventilation of air spaces around an insulated attic room may present some difficulty. Yet their ventilation is important, for it is the means for carrying off moisture which is not stopped by the vapor barrier. Unless such moisture is removed, it will condense under the cold roof, and lead to trouble. Normally, if blanket or board insulation is used, the problem takes care of itself, for the material permits air infiltration from one part of the air space to the other. But if insulating material is blown in through the rafters so that it fills all the spaces, be sure to require that the contractor who does the job makes the necessary provision for roof ventilation.

Whatever the shape of the roof or the attic rooms, the general rule to follow is that insulation must be applied between the used space and the roof, as close as possible to the space in use, and surrounding it on all sides which are exposed to the cold. You may need expert advice on complicated gable-windows and other odd forms.

Insulation of the outside walls of a house can save something like 15% in fuel in an average house, though the percentage will vary greatly for different types of

construction and different climates. The only satisfactory insulation for walls of existing houses is blown-in mineral or organic wool. The job must be expertly done to be satisfactory. If you don't know a competent and reputable contractor, ask the manufacturers of insulating materials to recommend contractors in your community.

(Some of the outstanding manufacturers of mineral wool insulation are: Johns-Manville, 22 East 40th Street, NYC; National Gypsum, Burley Bldg., Akron, N.Y.; Celotex, 120 South La Salle Street, Chicago; Rubberoid, 502 Fifth Avenue, NYC; and Flintkote, 4111, R.C.A. Bldg., NYC.) Then ask for estimates of cost from several of the recommended contractors.

The complaint is sometimes made that the blown-in material tends to settle down in the hollow stud space, leaving an uninsulated air-space at the top of the wall. The U. S. Bureau of Mines, after studying cases in which such "settling" was actually found, concluded that the fault was with the method of insertion of the insulation, and that when mineral wool is properly applied, it does not settle.

Another complaint against mineral wool is that it may collect moisture within the wall space, thus increasing the tendency for the material to pack down. Further, such moisture condensation causes "rotting" of the walls, and spoils both inside and outside paint.

Such complaints are relatively rare and no accurate studies are yet available on them. The Bureau of Mines reports that where moisture does collect in the wall space, it is due either to improper insulation, or to excessive humidities within the house. The fact is that unless your house is chronically and noticeably damp—as shown by paint and plaster deterioration both inside and outside—you should have no trouble in this connection. If you do have a damp house, consult an architect or engineer expert in these problems before you have insulation installed.

Some walls, on houses made of brick, stone or cement, have no space between the outer wall and the walls of the rooms for insertion of insulating materials. This is particularly true of old brick houses, where the inside plaster is applied directly to the masonry.

Contrary to popular opinion, masonry walls, even

though they may be thick, are poor insulators in the Winter time. The only way in which the insulation can be improved is by addition of insulating material either inside or outside the walls. Both are costly, but usually inside insulation is the more practical. This can be applied by nailing two-inch "furring" strips over the inside wall finish. Blanket insulation can then be applied between these strips, and a vapor barrier placed over the insulation. Then a new interior finish must be added—plaster, composition board, or some other material.

A less expensive, though somewhat less satisfactory job, can be done by using finished insulation boards only on the furring strips. But a vapor barrier on the room side is desirable in any case.

Thickness of insulation: Because of the difficulty of applying an even layer, loose fill insulation should generally be applied about two inches thick. With insulation in sheet form, however, the gain from added thickness beyond one inch may not be enough to warrant the extra cost. Experiments have shown that the first inch of insulation saves many times as much fuel as the second inch.

From article by Simon Breines, Reports, June 1943.

HOME LIGHTING

Production of many types of light fixtures has either ceased or been considerably curtailed, but essential fixtures are still available. But this is no time to make anything but absolutely necessary changes in your home lighting system.

• FLUORESCENT TUBES

Fluorescent lighting offers advantages over conventional incandescent lighting. Its operating cost is much lower for the same amount of illumination, and it gives softer, more diffused light. If electricity costs you 5¢ or more per kilowatt-hour, it pays to invest in fluorescent fixtures for lights that are much used if fluorescent fixtures are available. At a rate much lower than 5¢ per kilowatt-hour, change to fluorescents may not be worth while, because of the comparatively high initial cost of the fluorescent fixtures.

Five samples of 15-watt daylight tubes tested by CU lasted an average of 2,260 hours, which compares with a life of about 1,000 hours for incandescents. Fluorescent

"15-watt 18-inch daylight" tubes produce illumination about equal to that of a 50-watt incandescent bulb. At any given wattage level, the fluorescent tubes will give about three times as much light as incandescents.

When operated on a-c, a single fluorescent tube has an imperceptible flicker which becomes visible when moving objects are about, and may be objectionable. This can be overcome by using two tubes together in a special fixture. Fixtures which can be used on both a-c and d-c are less economical than plain a-c fixtures.

The most efficient and least flickering "color" in fluorescent fixtures is the "3500°K white." The best type of fixture has a replaceable thermal glow cartridge starter (usually plugged into the fixture in back of the tube). After about 2,000 hours of use the tube usually fails to light; it should be replaced promptly. If the tube is allowed to remain in the socket, the starter will wear out and will also have to be replaced, and the auxiliary device which limits the electric current flow may also be damaged.

Fluorescent tubes range in size from 9 inches (6 watts) to 60 inches (100 watts). The most popular and most economical size for general use is the 15-watt, 18-inch tube, which lists at about 75¢ for a 1-inch diameter, and at 95¢ for a 1½ inch diameter tube. The 1½ inch tube is easier on the eyes than the 1-inch tube.

• INCANDESCENT BULBS

Despite "Better Light—Better Sight" advertising to the contrary, an illuminating intensity of 5 to 10 foot-candles, with the combination of direct and semi-indirect illumination frequently used in homes is adequate for ordinary reading for persons with normal vision.

The following table gives the distances at which light bulbs of various sizes (without a reflector) must be placed from reading matter to give an illuminating intensity of about 10 foot-candles.

SIZE OF BULB IN WATTS	DISTANCE IN INCHES
25	18
40	23
50	28
60	31
75	35
100	43

HOUSEHOLD GLUES AND CEMENTS

Household glues and cements are frequently labeled as "mend-alls"; however, their efficiency is confined to very specific kinds of repair jobs. There are several types:

Animal glues are solid, and must be soaked overnight, then heated before use. They make strong joints, but are impractical for general household use.

Liquid glues, usually made of either fish or animal material, can be used for wood or other stiff materials, but they are not water resistant. In general, if they are thick they produce strong joints; if they are thin they do not. After use, excess liquid glue should be wiped off the container and stopper to prevent the container from being glued shut.

Powdered glues, containing either casein, resin or combinations of the two, are actually cements rather than glues. They are easily mixed, are water-resistant and produce strong joints in wooden articles. The all-resin variety should be applied in a workroom which is as close as possible to a temperature of about 70° F. throughout the gluing process.

Liquid cements with either a cellulose or a resin base are water-resistant and somewhat flexible. They are not satisfactory for wood, but *cellulose* cements can be used successfully in repairing non-porous articles like glassware.

Flexible cements, mixtures of cellulose or resin base cement and latex rubber, should not be used to repair articles which are subjected to much strain. They are most suitable for pasting flexible objects together.

Liquid solders are not solders at all, but merely cellulose or resinous cements to which metallic powder has been added. They are entirely unsuitable for mending metal, the purpose for which they are sold. Their properties are similar to those of liquid and flexible cements.

The surfaces to which glues and cements are applied should be clean. Joints should be as well fitted as possible. The two parts should be clamped together firmly until the adhesive has set.

Ratings are based on general laboratory tests for strength in producing joints on various materials. The types are in order of quality, with ratings within each type in order of economy.

From the *Reports*, May 1942.

ACCEPTABLE**• POWDERED GLUES**

Grade A Casein Glue (Casein Co. of America). 4-oz. can (makes 12 oz. liquid glue), 25¢. Water-resistant. Best suited to woodworking and wood mending.

Cascamite (Casein Co. of America). 1½ oz. can (makes 1¾ oz. liquid glue), 10¢. Synthetic resin glue. Excellent for woodworking and wood mending; also satisfactory for mending dishes and pottery. Waterproof.

Weldwood (United States Plywood Co., NYC). 1½ oz. can (makes 1½ oz. liquid glue), 10¢. Synthetic resin glue. Properties and uses similar to those of *Cascamite* above.

• LIQUID GLUES

Dart Household Glue. 2 oz. bottle, 10¢. Samples tested showed variation in quality.

Lepage's Liquid Glue (Russia Cement Co.). 1¼ oz. bottle, 10¢.

Testor's Glue (Testor Cement Co.). 1¼ oz. bottle, 10¢.

McCormick Iron Glue (McCormick & Co.). 1¼ oz. bottle, 10¢.

Dennison Liquid Glue (Dennison Mfg. Co.). ¾ oz. tube, 10¢.

• LIQUID CEMENTS

The following brands of cellulose base liquid cement were found to be about equal in quality. All such cements are inflammable.

Amberoid (Amberoid Co.). 4 oz. can, 50¢. Made strong, waterproof joint for china or pottery, but brown color spoils appearance.

Duco Household Cement (E. I. duPont de Nemours & Co.). ¾ oz. tube, 10¢.

Testor's Clear Cement (Testor Cement Co.). ¾ oz. tube, 10¢.

John Collins Cement (Standard Laboratories). ¾ oz. tube, 10¢.

• MISCELLANEOUS ADHESIVES

Flexible Cement (Casein Co. of America). 2 oz. tube, 25¢. A mixture of casein glue and latex rubber. Useful for producing a waterproof joint in dissimilar materials; more useful as a paste than as a glue or cement.

Fix All Liquid Cement. 1½ oz. tube, 10¢. Apparently

ACCEPTABLE—CONT'D

made from water glass. Not waterproof, as claimed. Produced a strong joint in dishware and glass though joint came apart in water. Produced a fairly satisfactory joint for wood.

NOT ACCEPTABLE

The following "liquid solders" were not suited to the uses claimed for them — meaning gas or water pipes, leaky radiators or cans.

• LIQUID SOLDERS

Dart Metallic Solder. 10¢.

Metallic Liquid Mender. 35¢.

Giant Metal Mender. 15¢.

HOUSEHOLD OILS

The main purpose of household oil is to lubricate—to avoid or reduce friction between moving metal parts.

A lubricant should be thin enough to reduce friction to a minimum, but thick enough to provide an adequate protective film. Heavy machinery requires grease or heavy lubricants; light machinery (most household items) requires thinner oils.

Time and disuse of machinery should not cause the oil to harden or "gum up," as do those containing mainly animal or vegetable oil. Highly refined petroleum (mineral) oils are much more satisfactory. These are very light in color, usually pale yellow or green-yellow.

An oil with a high viscosity index is one which changes in consistency relatively little as the temperature changes. It provides surer protection under all circumstances.

Motor oil diluted with kerosene produces a light, cheap lubricant. Kerosene polishes and removes rust, but it has little lubricating effect. Don't pay for pure lubricating oil and get a large proportion of kerosene. If you need much lubricating oil for jobs where low flash point (temperature at which oil ignites) and marked viscosity changes are not drawbacks, save money by doing your own diluting. Use 4 parts of good quality light motor oil (SAE 10W) to one part of kerosene.

CU tested two to six samples of each of 22 brands of household oil. Ratings are based on viscosity at different temperatures, viscosity index, specific gravity, flash point, color, corrosive effects and net contents.

From the *Reports*, February 1942.

LIGHT OILS

BEST BUYS

The following oils of the "Acceptable" list were judged to offer the best value for the money, in the order given.

Gulfoil (Gulf Oil Corp., Pittsburgh). 10¢; cost per fl. oz., 2.5¢.

Sinclair (Sinclair Refining Co., Inc., NYC). 15¢; cost per fl. oz., 3.8¢.

ACCEPTABLE

(In order of quality without regard to price)

Esso (Esso Co., Bayway, N. J.). Large size, 25¢; cost per fl. oz., 6.3¢. Small size, 10¢; cost per fl. oz., 10¢.

Gulfoil (see "Best Buys").

Amoco (American Oil Co., Baltimore). 25¢; cost per fl. oz., 6.3¢.

Sinclair (see "Best Buys").

Texaco (The Texas Co., NYC). 15¢; cost per fl. oz., 5¢.

Singer (Singer Sewing Machine Co., NYC). 20¢; cost per fl. oz., 6.7¢.

Richfield (Richfield Oil Corp., NYC). 25¢; cost per fl. oz., 6.3¢.

Ritz (manufacturer or distributor not stated). 10¢; cost per fl. oz. 2.5¢.

Ever-Ready (Ever-Ready Co., NYC). 10¢; cost per fl. oz., 2.5¢.

Atlantic (Atlantic Refining Co., Philadelphia). 25¢; cost per fl. oz., 6.3¢.

Veedol (Tide Water Associated Oil Co., NYC). 15¢; cost per fl. oz., 3.8¢.

Wards Cat. No.—9531. (Montgomery Ward). 10¢ plus postage; cost per fl. oz., 2.5¢ plus postage.

3-in-One (The A. S. Boyle Co., Jersey City, N. J.). Large size, 25¢; cost per fl. oz., 8.3¢. Small size, 10¢; cost per fl. oz., 10¢. Had lowest flash point of all "Acceptable" oils. Lack of uniformity among different samples.

Shell (Shell Oil Co., NYC). 20¢; cost per fl. oz., 6.7¢.

NOT ACCEPTABLE

Cities Service (Cities Service Oil Co.). 20¢; cost per fl. oz., 5¢. Had an excessively low flash point.

Sears' Cross Country Cat. No.—4411 (Sears-Roebuck). 9¢ plus postage; cost per fl. oz., 2.2¢ plus postage.

(Continued next page)

NOT ACCEPTABLE—CONT'D

Labeled "General Purpose Oil." Showed excessive corrosive and tarnishing effects. Had a low viscosity index.

Sears' Cross Country Cat. No.—4408 (Sears-Roebuck). 19¢ plus postage; cost per fl. oz., 0.6¢ plus postage. Labeled "Light Machinery Oil." Was heavier than **Sears'** Cat. No.—4411 above. Had an excessively low viscosity index.

Dart New No. 1 (Slick Shine Co., Inc.; distributed by Kress Stores). 10¢; cost per fl. oz., 2¢. Showed excessive corrosive and tarnishing effects.

Mobil (Socony-Vacuum Oil Co., NYC). 25¢; cost per fl. oz., 6.3¢. Excessive corrosive and tarnishing effects.

Sunoco (Sun Oil Co., Philadelphia). 15¢; cost per fl. oz., 3.8¢. Had an excessively low flash point.

HEAVY OILS**ACCEPTABLE**

Gulf Electric-Motor Oil (Gulf Petroleum Specialties, Pittsburgh). Large size, 24¢; cost per fl. oz., 3¢. Small size, 10¢; cost per fl. oz., 5¢.

NOT ACCEPTABLE

3-in-One Heavy Body Oil (A. S. Boyle Co., Jersey City, N. J.). Large size, 25¢; cost per fl. oz., 8.3¢. Small size, 10¢; cost per fl. oz., 10¢. Had an excessively low viscosity index.

INSECT CONTROL

Liquid insecticide sprays dispose of insects indoors quickly and efficiently, provided the spray comes into actual contact with the insects. Close all doors and windows; then spray the insecticide thoroughly around the room, under the furniture and in the closets, and keep the room closed for a short while thereafter.

Liquid insecticide sprays contain deodorized kerosene extracts of pyrethrum, which may be combined with other powders or extracts, such as rotenone or lethane, to increase their potency.

Commercial standards exist which grade the sprays according to killing power as AA, A or B. Buy only graded products, as the standard gives some assurance that the spray will be effective if used as directed. The standard also provides that the spray will be harmless

to man and household pets (although many persons are allergic to pyrethrum); will not stain fabrics or household furnishings which are not stained by dry-cleaning fluids; will not contaminate clothes or food, nor corrode metal; and will not have an objectionable odor. Grade B insecticide, which is the least expensive, is sufficiently potent for ordinary use.

Outdoors, or where screening is absent or inadequate, insect repellents give good protection. Despite its pungent odor, oil of citronella is the most popular repellent. It loses its potency after a few hours through evaporation, but if used in a cream base the rate of evaporation is considerably retarded, and longer protection results.

For protection out of doors, dab the lotion on your skin. To ward off insects that come into the house through the screens, swab citronella on the screen or sprinkle it on a cloth or towel which you drape over the bed before retiring.

There are comparatively odorless skin repellents, which cost more than citronella, but are effective for a longer time. They ward off houseflies and mosquitoes and in stronger solutions resist gnats and chiggers. But they have little or no effect against the large beach fly, the beach gnat or the big green bottle fly, and they must be applied to every bit of exposed skin. These solutions generally contain alcohol; therefore care must be taken to prevent their getting into the eyes or other sensitive areas. Currently they are being much used by the army, and civilian supplies of them are scarce.

For further information on insect repellents, see the *Reports*, July 1942.

Fumigation with hydrogen cyanide gas ("cyanide gas" or "hydrocyanic acid gas") is effective in exterminating insects, but it is a deadly poison and should be used only by a competent professional exterminator working under a license issued by the local health department, and only if other methods described here have been tried, and failed.

Well fitted screens of 16-mesh wire cloth will protect houses against flies, mosquitoes and other flying insects. Full length window screens are best. Screen doors should open outward. Screening of chimneys and open fireplaces may be necessary.

310 INSECT CONTROL

Excellent pamphlets on the control of insects and other pests have been issued by the U. S. Dep't of Agriculture, and are available from the Sup't of Documents, Washington, D. C. (see p. 11 for ordering). The following suggestions may be helpful.

● ANTS

If possible, find the nest and destroy by pouring into it 1 or 2 tablespoonfuls of carbon disulphide, available at drugstores. This is explosive and inflammable; keep matches, lighted cigars, etc., away while using it. Sodium fluoride powder dusted about places frequented by ants is a cheap and often effective means of control. Sodium fluoride is a poison; do not inhale the dust, and keep it away from children and pets.

● BEDBUGS

Where fumigation is not possible, kerosene should be meticulously injected with a syringe into all cracks in furniture, helical springs, and points where the springs are connected. *Be sure to keep windows open and all flames away to prevent fire or explosion.* Infected mattresses should be sent out for sterilization.

● BEES, WASPS, HORNETS

The sting of these insects should be treated by removing the stinger, if present, and then giving the same care as for mosquito bites (see below). Pain or swelling may be lessened by applications of ice-cold wet compresses.

● COCKROACHES

Sodium fluoride (poison; see above under "Ants") may be carefully dusted into corners, cracks, etc. Dusting with borax or pyrethrum powder (the latter can be bought at seed stores or from insecticide companies) is safer, but less effective. Dusting with flowers of sulfur repels roaches.

To prevent reinfestation, watch carefully all boxes of food supplies and laundry brought into the house. Fill with putty, plastic wood or plaster of paris all cracks leading to spaces behind baseboards, trim, etc., and around pipes passing through floors. Dust sodium fluoride under the kitchen linoleum, and under shelving or oilcloth.

• MOSQUITOES

Since mosquitoes breed in water, the first step in eliminating them is to prevent water from collecting in open vessels or on poorly drained ground. Barrels or cisterns containing water not used for drinking should be treated with a tablespoon of kerosene every two or three weeks. A small handful of borax is best for unused toilets, fire buckets and water used for washing dishes or clothing. Treat drain traps in basements and areaways with kerosene every week or two, or with borax each time drains are flushed. Spray the surface of cesspools with a pint of equal parts of used motor oil and kerosene or introduce it through a toilet every three or four weeks.

A good stock of goldfish or top minnows will protect ornamental pools if fish are not fed and vegetation is not allowed to become too dense.

Scratching mosquito bites invites infection. Treatment with dilute ammonia water or a paste of sodium bicarbonate may relieve the itching somewhat. Follow this with a soothing application such as zinc oxide and lime water lotion or calamine lotion.

• MOTHS

The following materials, if used in the amount of at least 1 lb. for each 100 cu. ft. of storage space, and distributed thoroughly among the articles to be protected in a *tightly sealed* chest or closet, will help prevent damage from moth larvae.

Naphthalene flakes or balls (moth balls).

Paradichlorobenzene.

Gum camphor (expensive).

Dry cleaning kills moths, larvae, and eggs. "Moth-proofing" of wool to prevent damage by larvae, is effective, provided the treatment is permanent. Look at the guarantee, supplied with the method and make sure that it is permanent, and that the wording is such as to make the processor fully responsible in case of failure. "Moth cakes" and preparations for use in metal or glass devices which hang in the closet are ineffective as ordinarily used. Moth preparations with arsenic are dangerous.

(Continued next page)

● SILVERFISH

Silverfish feed on sizing in paper, bookbindings and starchy insulation materials and starched clothing. They eat holes in thin fabrics, particularly rayon, and are fond of vegetable foods having a high starch or sugar content..

The cheapest means of control is the following poisoned bait: $1\frac{1}{4}$ cups oatmeal (ground to flour); $\frac{1}{4}$ teaspoon white arsenic; $\frac{1}{2}$ teaspoon granulated sugar; $\frac{1}{4}$ teaspoon salt. Mix together dry; moisten and mix thoroughly; then dry thoroughly and grind into small bits. Sodium fluoride powder can be substituted for white arsenic; but then no moisture should be added. Place about a teaspoon of bait in each of several shallow boxes, cover loosely with crumpled sheets of paper and distribute near haunts of silverfish. Don't leave within the reach of babies or pets.

Pyrethrum powder dusted or blown into haunts of silverfish is also useful.

JUICE EXTRACTORS

Fruit juicers are of two general types, reamer and pressure. The simplest and cheapest of the reamer type is the one-piece glass saucer with conical center, costing from 10¢ to 25¢. It is satisfactory where use is infrequent and little fruit is squeezed at a time. Do not buy the two-piece sets with a glass extractor having slots through which the juice drains into a glass bowl. The slots clog and chips of glass can fall into the juice unnoticed.

Reamer-type extractors are less desirable than the pressure type because they are somewhat less convenient, slightly more difficult to clean and deliver slightly more pulp with the juice. They do, however, yield more juice.

There are two kinds of pressure juicers. In one the fruit is squeezed between two jaws (jaw-pressure type) and in the other it is forced down over a cone (gear pressure type). The jaw-pressure type is somewhat more convenient and better adapted to all citrus fruits. However, it crushes the fruit to the extent that some of the oils are forced out of the outer skin and, along with dirt and coloring matter, may be carried into the juice. Fruits should be thoroughly washed before squeezing in this type.

There may be a few pressure-type extractors left on

dealers' shelves, but they are scarce, because metals are required for their manufacture. The reamer type, which can be made of glass or plastics, is more readily available.

KITCHEN KNIVES

Most kitchen knives are bought from the counters of the five-and-tens; and tests show most of them to be extremely poor buys. CU's advice is to buy good cutlery and take good care of it.

The best blades are *forged*—hammered from bars of heated steel. Forging produces a fine-grained metal which takes and holds a sharp cutting edge and allows the blade to be tapered from handle to point. You can recognize a forged blade by its thick bolster (the part of the blade which is joined to the handle). However, knives of inferior quality sometimes have an overlay of metal at the bolster to make them look like forged blades. Blades *stamped* from sheets of steel usually aren't tapered, though occasionally a stamped blade may have a slight degree of tapering.

Despite their resistance to corrosion, stainless steel blades are generally (not always) inferior to carbon steel blades. Chromium-plated knives can combine resistance to stain with a good quality of carbon steel.

• KNIFE SHARPENERS

High quality cutlery should be taken to a professional grinder, since it requires very skilful sharpening. Once a good edge has been ground into a blade, you can keep it sharp at home by occasionally whetting the knife against a butcher's steel or hand stone.

Poor quality knives, however, won't hold an edge long enough to make it worthwhile to have them ground by an expert. You can keep a fairly good edge on them by frequent use of a kitchen knife sharpener.

From the *Reports*, July 1941.

METAL POLISHES

To make metals shine, their surface must be lightly scratched with the right kind of abrasive; the scratches must be so minute that they are invisible to the naked eye. If the abrasive is too hard, the scratches will be visible and the surface of the metal marred; if it is too soft, it will merely slide over the metal surface.

The hardness of the metal is the most important factor

in the choice of the correct abrasive. Since silver is considerably softer than brass, for example, the same abrasive should not be used on both.

Brass, bronze and copper may be polished with the same preparation. All corrode by forming dark-colored compounds on their surface, and the corroded surface accumulates greasy dirt. Polishes consisting of suspensions of amorphous silica or tripoli containing ammonia or a similar chemical cleaner are best for these metals. Liquid polishes should not contain inflammable substances.

Chromium needs no polishing, since it forms no compounds on exposure to air. It does accumulate a film of oil and other dirt. In the home, this may be removed by plain soap and water or a few drops of kerosene on a damp cloth. Chromium on automobiles, where solid dirt accumulates, is cleaned best by commercial cleaners.

The best cleaner for aluminum is steel wool and soap. Commercial cleaners often contain abrasives too harsh to be used with complete safety on aluminum.

Silver may be cleaned in one of two ways:

1) by a polish containing a mild abrasive. Silver polishes containing cyanides should be avoided because of their highly poisonous nature. Those containing silica should also be avoided because silica is too harsh.

2) by the so-called electrolytic method—the silver is placed in an old aluminum pan and covered with hot water in which a little washing soda (2 teaspoonfuls to a gallon of water) or trisodium phosphate (1 teaspoonful to a gallon) is dissolved. The tarnish is dissolved off, and a small amount of polish will then impart the desired shine.

Laboratory tests of metal polishes are under way as this goes to press. Results will appear in the *Reports* early in 1944.

PAINTS

● HOUSE PAINTS

Wartime house paints are inferior to the pre-war product. If possible, postpone painting until better paints are again available. Houses that have been painted in the past four years should be able to go another year without repainting. Houses that have always been painted with pure white lead can safely go much longer than that.

If you must repaint, look in small paint stores for old stocks of the paints used in the past. If you can't find this your best choice will probably be pure white lead paint purchased in the form of soft paste. You will probably not be able to buy pure linseed oil to mix with it, but white lead paint will be less altered in character than most other paints.

Wartime paints can be recognized by examination of the label statement of ingredients. If the amount of such ingredients as mineral spirits, turpentine, "thinner," water, "colloidal solution," and drier exceeds one-sixth of the amount of the linseed oil, the paint is probably of the wartime variety.

• INTERIOR PAINTS

The deterioration in the quality of interior oil paints has been matched by increasing production of water paints. Water paints are of limited usefulness, however, and where oil paints are needed, it is best—as with house paints—to try to postpone repainting jobs until better products are again available.

Paints that are thinned with water are called water paints. Paints thinned with mineral spirits or turpentine are called oil paints. Important water paints include calcimine, casein paint, cement-bound water paint and emulsion paint.

Calcimine is sold as a dry powder to be mixed with water before use. Calcimine is cheap, and one coat—which is all that is necessary—makes a flat coat of excellent appearance. It can be washed off easily when it is to be replaced.

If calcimine is applied to unusually porous surfaces, such as poorly plastered walls, it has some tendency to rub off, when dry. To avoid such "chalking," it may be necessary to apply a glue sizing before the calcimine is painted on.

Calcimine does not make a protective coating for wood because, as with all water paints, moisture passes through it readily.

Water leaves spots on coatings of calcimine so that it is unsuitable for use near sinks, washtubs, lavatories, and other places where water may be splashed on walls. Calcimine cannot be washed when soiled. It must be washed off and a new coat applied.

Calcimine is one of the safest substitutes for good paint to use during the wartime emergency, for it is cheap, and can easily be removed when good paints again become available. Although it is not customary to apply calcimine over oil paint, it can be done as a wartime procedure, provided it is later washed off before more oil paint is applied.

Some casein paints are sold as dry powders to be mixed with cold water before use. Casein paints are similar to calcimine, except that they are much less readily spotted by water and they will stand a reasonable amount of careful washing. Dust and dry dirt can be washed from casein paint, but grease, ink or other liquids penetrate too deeply to be washed off. When casein paint is to be repainted, the new coat is applied directly over the old one, for it is a difficult job to remove casein paint. Casein paints should not be used in damp basements because long continued dampness may cause them to mold and give off an objectionable odor.

When obtainable, casein paint should prove useful during wartime for new plaster or fiberboard walls and ceilings.

Although the manufacturers of casein paint often insist that it may be applied over oil paint, it is not considered wise to do so, particularly if it is desired to return to oil paint afterwards.

Some of the casein paints in paste form contain linseed oil or synthetic resin to improve their resistance to washing. Or the manufacturer may advise the user to add about a pint of linseed oil to a gallon of the paste paint for the same purpose. Although the oil or resin does improve the water resistance of the paint, it also impairs its hiding power so that it may be necessary to apply an extra coat.

Cement-Bound Water Paints have Portland cement as the binder. They are useful for painting cement, masonry, or brick walls or ceilings, either indoors or out, but they do not last well on floors subject to traffic. The manufacturer's directions for application should be followed carefully because some formulas require that the wall be well wetted with water before the paint is put on.

Emulsion Paints are often simply casein paints in which synthetic resin has been substituted for a large

proportion of the casein. Many of the new wall paints that are widely advertised under various trade names are of this type. Some may contain no casein at all.

Emulsion paints are somewhat superior to casein paints in resistance to water and to washing, but they are inferior to good flat wall paints. Grease and other liquid contaminants penetrate into the coating of emulsion paints enough to make washing difficult if not impossible.

In general, the emulsion paints can be recommended for new plaster or fiberboard walls, or walls that have not previously been painted with oil paint. It is not recommended, however, that emulsion paint be applied over oil paint where the intention is to return to oil paint when the war is over.

For those who now have oil paint on their walls the safest practice is to defer repainting for the present if it is at all possible to do so. If the walls are dirty, try washing them. If they must be repainted, consider using calcimine as a temporary coating until good oil paint is again available, when it will be easy to wash off the calcimine.

Muresco is a well-known brand of calcimine; *Sunflex* and *Luminall* are casein paints; *Bondex* is a cement-bound paint; *Kem-Tone* is an emulsion paint.

From the *Reports*, August 1943.

PAPER TOWELS

An efficient paper towel must have its fibers packed loosely enough to be absorbent; it must be thin enough to be flexible, yet not so loosely packed or so thin that it falls apart. To balance these qualities the towel must either be crimped (roughening the surface) or chemically treated.

Paper towels deteriorate when stored, especially if tightly packed. Avoid buying towels packaged in tight rolls. Standard size towel is $7\frac{1}{2}$ by 11 inches. Standard packages contain 150 sheets.

CU tested 18 brands for thickness, weight, bursting strength and absorptive qualities before and after "aging" (a test that simulated six months of storage). Ratings are based on all-round results. Packages are standard size unless otherwise stated.

From the *Reports*, May 1942.

(Continued next page)

BEST BUYS

The following towels of the "Acceptable" list were judged to offer the best value for the money, in the order given.

Scott Towel (Scott Paper Co.). 10¢. Thick and heavy, absorbs rapidly; high bursting strength, adequate crimping; highest quality towel tested.

Red Cross (A. P. W. Paper Co.). 9¢. Bursting strength and absorption same as Scott Towel. Slightly thinner and lighter; tore slightly faster when wet.

Balm (J. J. Newberry Co.). 8¢. Good all-around towel.

ACCEPTABLE

(In order of quality without regard to price)

Scott Towel (see "Best Buys").

Red Cross (see "Best Buys").

Evergreen (Hoberg Paper Mills, distrib. Montgomery Ward Cat. No.—7423). 10¢ plus postage. Thin, fairly heavy paper with high bursting strength; good absorption before aging, fair after aging.

Balm (see "Best Buys").

Co-op Blue Label (Eastern Cooperative Wholesale). 9¢. Thick, light paper, only fair bursting strength, good absorption before and after aging.

Statler (Statler Tissue Co.). 9¢. Thick, fairly heavy paper, good bursting strength; good initial absorption but poor after aging.

United Cross (United Whelan, Inc.). 10¢. Thin, light paper with fair bursting strength and good absorption before and after aging.

Co-op Red Label (Eastern Cooperative Wholesale). 10¢. Thinner and heavier than *Co-op Blue Label*, higher bursting strength, but absorption after aging only fair.

Gimbel's (Gimbel Bros., NYC). 10¢. Fairly thick, heavy paper, fair bursting strength and good initial absorption, poor absorption after aging.

Aimcee (Associated Merchandising Corp.)¹. 25¢. 150 sheets, 11 x 15 in. Sheets are twice the size of ordinary paper towels, which makes for waste. Fairly thick, heavy paper, fair bursting strength, good initial absorption, poor after aging.

Warwick (Erving Paper Mills). 10¢. 100 sheets, 7½ x 11 in. Fairly thick, heavy paper, fair bursting strength, fair absorption before and after aging.

¹ For a list of AMC stores, see page 10.

ACCEPTABLE—CONT'D

Ben Mont Red Wrapper (Ben Mont Paper, Inc.; distrib. F. W. Woolworth Stores). 15¢. Fairly thick, heavy paper, fair bursting strength; good original absorption but poor absorption after aging.

Ben Mont Green Wrapper (Ben Mont Paper, Inc.; distrib. F. & W. Grand Stores). 10¢. From tests, appeared to be about the same as *Ben Mont* above.

Dart (S. H. Kress Stores). 10¢. 55 sheets, $7\frac{1}{2}$ x 11 in. Thick, light paper, poor bursting strength; good initial absorption but poor after aging.

NOT ACCEPTABLE

None of the following had good bursting strength. All absorbed poorly.

Celtek. 5¢. 100 sheets, $7\frac{1}{2}$ x 11 in.

Park Lane. 10¢. 150 sheets, marked $7\frac{1}{2}$ x 11 in., actually only $7\frac{1}{2}$ x $10\frac{3}{4}$ in.

Planet. 10¢.

Hearn's Red Label. 12¢.

POTS AND PANS

Glass, enamelware, earthenware and cast iron have replaced aluminum, stainless steel and copper on store shelves, though it is expected that some aluminum and other metal utensils will be made in 1944. Among the various types of cooking utensils there is no "best." Each has its place in the kitchen.

It is economy to buy good quality pots and pans, because their durability and the savings in fuel will offset their higher initial cost.

Shape is important. Pots and pans should sit flat on the stove. Flat bottoms save fuel especially with an electric stove. Maximum efficiency is obtained from pans slightly larger than the heating unit. Covers should fit tightly.

Pressure cookers reduce to a half or a fourth the cooking time needed with ordinary utensils. That means great savings in fuel. But they are expensive, and very few, if any, are left in the stores.

Enamelware is made by coating a steel base with enamel, a form of glass. It is second only to aluminum in heating efficiency. It absorbs heat quickly but spreads it slowly and unevenly. It must be heated slowly, or foods will scorch, heat tints will develop and the utensil perhaps be chipped and ruined. Enamelware will also chip

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if struck heavily. If chipped on the inside, it should be discarded immediately.

Enamelware may be cleaned with mild scouring powders or with steel wool. But when foods dry or cake on the enamel surface, they should be soaked rather than scraped off. Don't use enamelware utensils for preparing or storing highly acid foods like citrus fruits or tomatoes. Enamelware sometimes contains antimony, a toxic metal, which may form poisonous compounds with strong food acids.

Quality of enamelware is judged by weight and thickness. The better grades have several layers of enamel on a heavy steel base. Many tiny cracks or air bubbles on the surface are likely to be signs of low quality.

Glass cooking utensils, though high in price, have many advantages. Their transparency allows the cook to watch the contents. The same utensil may be used to mix the food, cook it, serve it and store it. Heating efficiency of glass is not so high as aluminum or enamelware, but glass is superb for baking. Food chemicals have no effect on it, and almost any kind of cleaner may be used. Good glass cooking utensils can be heated directly over the flame but they should not be subjected to rapid temperature changes.

Cast iron is heavy and generally not too convenient, but it is good and extremely durable for skillets, griddles and Dutch ovens. It is not easy to clean and will rust if not dried thoroughly. Cast iron utensils are usually sold with a lacquer coating to prevent rusting. This should be removed by scouring with soap and water. The utensil should then be rinsed and dried, covered with cooking oil, tallow or grease, placed in a warm oven for several hours, then rinsed and dried again. Before storing for any length of time, iron pots should be covered with tallow or oil to prevent rusting.

Sheet iron utensils are not good buys. They dent and rust easily.

Earthenware utensils are ideal for food requiring a long, slow cooking period at low temperatures. They must be treated carefully, since they break under sudden temperature changes.

• CARE & REPAIR

Observe these rules to lengthen the life of your present supply of pots and pans:

Don't leave any kind of a pan over a flame without any liquid inside. Don't try to scrape off dried food from the inside with a sharp instrument. Don't use ordinary commercial cleaning powders on aluminum vessels; use steel wool or special aluminum cleaners instead.

Be careful of commercial pastes, liquids and patches sold as mending preparations to cover up chips and cracks. Most of these are of no permanent value.

Metal solders for patching utensils are usually not satisfactory, because leaks result eventually. They may be effective on small holes where heat is not applied directly. The best method of repair is the use of a regular prepared patch of the same material as the pot or pan, if these are available. They consist of a large metal head (of various sizes to fit the holes) with a threaded shaft, a cork gasket, a washer and a nut. If properly inserted and tightened, these prepared patches will make your damaged utensils entirely useable.

From the *Reports*, April 1942.

RADIOS—CARE AND REPAIR

To minimize replacements and repairs—

DON'T leave the radio turned on when you're not listening just to provide a background noise for other activities or for fear of missing something. Turn it on for the programs you want, then turn it off. The more the radio is on, the sooner tubes and certain other parts are likely to require replacement.

DON'T try to get excessive volume out of the radio. This is particularly true of small radios, which are not designed to provide dance-hall volume. An overloaded speaker can be badly damaged in a short time. Judge volume by speaking voice, which should sound natural, without rattle or distortion.

DON'T handle switches and controls roughly. Rough handling can cause serious damage.

• REPAIRS

Obvious defects, such as frayed cords, broken plugs, loose or broken connections should be immediately repaired—as they should be on any electrical appliances.

If your radio goes dead or develops bad hums or crackles do a little investigating yourself before you decide to call in a serviceman.

If you can't get any sound out of the speaker, make

sure that the receiver is plugged in; if it is, wiggle the plug or bend the prongs to be sure it is making connection. If that has no effect, check on the outlet by attaching a lamp or some other appliance to it. If you're on a direct current line and you have an ac-dc radio, try reversing the plug.

The next thing to look for is a dead tube. A tube that doesn't get hot in 15 minutes while the other tubes heat up is dead. In an ac-dc radio, however, none of the tubes will light if one tube is burned out. If you take out more than one tube to have them checked at a radio store, be sure the numbers of the tubes are marked where the tubes go in.

If there are peculiarities of reception such as noise, lack of reception from certain stations, weak reception, fading, etc., check with a neighbor to see if he is having the same difficulties. If he is, the trouble is probably exterior to your radio.

Rattles are not always caused by the loudspeaker. Check any nearby object that may be loose—a picture frame, articles in a table drawer, etc. Also, the glass in front of the radio dial may vibrate. Weak or defective tubes may also be responsible for rattles and distortion.

Noise can be caused by almost anything. If you hear the noise with your outside antenna disconnected and the volume turned on full—and it is a noise which your neighbors do not get on their receivers—the trouble is in your radio. If the noise is pronounced during high winds, it may be caused by the antenna system.

Disconnect the antenna, and, if it is an ac radio, connect a good ground to the antenna post on the radio (no wire to the ground post). This will eliminate antenna noise, unless the aerial, in swinging, is making contact with some other conductor. In this case the noise may well be heard on several neighboring radios too. Antenna noise is best eliminated with a new antenna and lead-in (but you may find that the ground-to-antenna-post connection works better than a regular aerial!). Do not try the ground-to-antenna-post test on an ac-dc receiver, unless you insert a paper or mica (not electrolytic) condenser between the ground con-

nection and the antenna post. Any capacity (size) condenser will do, as long as it is rated at 200 volts or higher. A noisy volume control can often be cured by wiggling it back and forth a hundred times or so.

Hum: This too may not be the fault of the radio, and is often caused by an adjacent appliance or light. Try moving the floor lamp away.

Erratic reception: This includes fading, intermittent signals, certain noises, howling and some types of squeals. No panacea, but a trick that occasionally works, is to remove each tube and tube shield (one at a time) and then return it to its place. Repeat the process until the trouble is eliminated, or you are convinced that it does no good. (The idea is to clean certain contacts that may be responsible for the complaint.)

Keep handy the direction sheet that came with your radio. It often contains useful information concerning minor service jobs. However, unless you are reasonably certain of what you are doing, don't attempt a possibly complicated repair—that is, any service assignment which requires the removal of the chassis from the cabinet (except for small radios where the chassis must be removed to gain access to tubes, dial, etc.).

Always disconnect the radio (pull out the plug) before touching tubes or any other interior portion of the radio, including chassis, antenna and ground posts. And watch out for hot tubes (especially metal ones); they can give you a bad burn for several minutes after the radio has been turned off.

From the *Reports*, January 1943.

REFRIGERATORS—CARE AND REPAIR

To keep refrigerators in good condition, and to keep operating costs down, observe the following precautions:

Location: Keep the refrigerator away from stoves, radiators and direct sunlight. Leave at least three inches of air space at the back, and at least six inches above the box.

Defrosting and cleaning: Defrost weekly, and never allow more than a quarter inch of frost to collect on the freezing unit. While the refrigerator is defrosting, remove the contents, including shelves, and wash the in-

side of the box with lukewarm water to which has been added baking soda or tri-sodium phosphate (one teaspoonful to a gallon of water). Wash the outside with mild soap, and wipe dry.

Every three to six months, clean the condenser (the flat plate, coils or radiator near the motor) with a stiff brush or a vacuum cleaner.

Preservation of food: Store food in tightly-covered refrigerator jars or bowls; even fresh fruits and vegetables should be kept in hydrators or covered bins. Let foods cool to room temperature before placing them into the refrigerator. Arrange foods on the shelves so that meat, milk and other foods which spoil easily are in the coolest parts of the box, and so that there is plenty of circulation around them. Use a thermometer to check temperatures.

Cold control: Keep the refrigerator no colder than necessary. The recommended temperature for the milk compartment is not over 45°, the rest of the box, not over 50°. Make no more ice cubes than you need; if you don't use cubes, trays can be left empty.

Door: Don't open the door more often or for longer periods than is necessary. Arrange your work so that you can accomplish several things each time you open the refrigerator door.

Inspect the door to see that it closes tightly. Check the gasket (rubber ring around the door) to see that it fits. An easy way to do this is to insert a paper the size and thickness of a dollar bill, then to close the door over it. If the paper pulls out easily, the gasket is not tight enough; have it checked by a service man. The strike plate (the metal plate on the door into which the lock catches) can be adjusted on many refrigerators so that when the door is latched the gasket will be tight.

Keep oils and fats away from the rubber gasket; clean it occasionally; when it begins to fail, turn the gasket over (top to bottom).

Motor: Newer machines should maintain proper temperatures when they operate about one-fifth of the time; older models operate a longer portion of the time.

If instructions for your refrigerator call for oiling the motor, follow them carefully. Sealed units need no oil. If the motor is non-sealed, you can determine whether

or not the bearings are loose by taking hold of the shaft or pulley and trying to move the shaft from side to side. After the motor has run for a minute, the oil should fill the sleeve bearing enough to prevent noticeable side motion of the shaft in either bearing. Ball bearing motors should have no side play at any time. Some ball bearings are intended to be lubricated with grease, but it is possible to cause them to heat by lubricating them too much. If too much grease is forced into the bearing enclosure, it obstructs the clear channel of the balls with the result that the grease is continually churned, a process which requires energy and develops heat.

Removing the dust and dirt regularly from non-sealed motors is very important. It would be impossible to overemphasize the necessity for keeping this type of motor clean.

V-belts should be kept tight enough so that they do not slip when the motor starts or stops. Slipping may ruin a V-belt in a short time. Oil and grease of any kind are ruinous to rubber belts.

From the *Reports*, February 1943.

RUGS

The best buying advice on rugs at present is not to buy them at all, unless old stocks of all-wool rugs are available. Manufacturers are restricted to a small part of their peace-time consumption of wool, and at best they can obtain only a very small amount of fine carpet wool. As a result, most rug and carpet fabrics now produced are a blend of coarse wool and rayon. No blend approaches an all-wool rug in durability. Furthermore, blends soil much more rapidly than wool and shrink more when shampooed. They mat excessively and recover their nap less after shampooing. But if you must buy a rayon-and-wool rug, don't buy one containing less than 50% wool.

Hemp, cotton and jute are normally used for the backing of rugs and carpets. The first two are preferable, since jute tends to decay if it is wet for any length of time. No hemp is available at present, and stocks of jute may soon be entirely depleted. Backings are being made today of either cotton or paper yarns. When dry, paper yarns wear fairly well, but they become extremely weak when wet.

According to tests made by the Federal Bureau of Stand-

ards, density of pile is a major factor in determining the durability of a rug. You can find out the relative density by counting the number of tufts per square inch on the back of a rug. Rare Orientals may have as many as 500 tufts per square inch; good *Wiltons* have about 120 and medium *Wiltons*, about 90; good *Axminsters* and *Velvets*, about 80; medium *Axminsters* and *Velvets*, about 60. Poor rugs of any weave may have as low as 25 tufts per square inch.

A pile made of worsted (combed) yarns will wear better and is more expensive than pile made of woolen (uncombed) yarns. Twisted yarns of two or more plies will also give extra wear for the same number of tufts per square inch.

It is usually advisable to select the better grades of less expensive weaves rather than the cheaper grades of more expensive weaves. In decreasing order of cost the most common weaves of rugs with cut-pile surfaces are *Wilton*, *Axminster* and *Velvet* (the term "Wilton-Velvet" is a misnomer). The tapestry weave has a loop pile, and rugs with it are generally cheaper than cut-pile rugs. The term Broadloom is correctly applied to any seamless rug woven 54 inches or wider, regardless of quality or weave.

Under-pads will add considerably to the life of a rug, besides producing a luxuriant feel of high pile—and they're relatively inexpensive. Pads increase the durability of rugs with short pile more than those with long pile.

RUG AND UPHOLSTERY SHAMPOOS

There are three types of rug and upholstery cleaners: dry cleaning solvents, and both soap and soapless sudsing compounds. Dry cleaning solvents are used mainly on fabrics which cannot be wet shampooed. Since they are dangerous to the user, extensive use of them in the home is not recommended. Non-washable upholstery fabrics (silk, satin, velvet) cannot be shampooed, but should be dry cleaned. Mohair, velour, frieze or tapestry upholstery can be shampooed quite adequately in the home. As for rugs, home cleaning, no matter how well done, does not take the place of a good professional cleaning. But it can give an effective surface cleaning between professional jobs.

Before applying any shampoo, it is essential to test it on a small portion of the rug or upholstery to be sure that colors will not run or fade. It is best not to clean rugs of delicate tints at home. No shampoo, soap or soapless, should be applied directly to rugs or upholstery. To

prevent too much wetting, work into a thick lather and apply only the suds.

Soap does a fairly good cleaning job and gives a thick lather, but it has several disadvantages. Its alkalinity may injure fabrics and colors; when used with hard water, it forms scum deposits; soap left in the fabric may decompose, giving off rancid odors and collecting dirt rapidly. An acid rinse, if used to dispose of the scum, forms fatty deposits which are just as bad as the scum.

Commercial soap cleaners or home-made soap solutions are better than plain soap. Liquid commercial cleaners, though more expensive, are better than the powders and pastes available. An effective, cheaper shampoo can be made at home by mixing three or four tablespoonfuls of ordinary soap flakes or powder in a gallon of hot water and adding one or two tablespoonfuls of water softener if the water is hard.

Soapless sudsing compounds are by far the best wet cleaners for rugs and upholstery. They give more abundant lather than soap solutions, clean effectively and have none of the serious defects common to soap. Those marketed as white powders are more economical than the liquids.

CU tested one or two samples each of 25 brands of rug and upholstery cleaners, ten of them of the soapless type. Since the soapless compounds were found to be generally superior to the soap solutions, the two types are rated separately. Ratings were based on percentage of dry content, percentage of soap (in soap types), alkalinity, cleaning and foaming ability, types of builders present, tendency to form scums. Net contents, packaging and labeling were checked.

In addition to the purchase price, the estimated cost of cleaning a 9 x 12 ft. rug or a three-piece upholstered suite is given in brackets for each brand. On the average, a pint of the ready-to-use or a gallon of the diluted solution is sufficient for cleaning either the rug or the suite.

From the Reports, June 1942.

SOAPLESS CLEANERS

BEST BUY

Co-op Synthetic Suds. (National Cooperatives, Inc.) 29¢ [3½¢]. Powder. Available nationally in Co-op stores.

(Continued next page)

ACCEPTABLE

(In order of quality without regard to price. Cleaners are for both upholstery and rugs unless otherwise noted)

Vapoo (Vapoo Products Co.). \$1 [33¢]. Powder. Available nationally.

Aimcee (Associated Merchandising Corp.). 59¢ [59¢]. Liquid. Available in AMC stores¹.

Co-op Synthetic Suds (see "Best Buys").

Liquid Veneer (Liquid Veneer Corp.). 34¢ [34¢]. Liquid. **Carbona Soapless Lather** (Carbona Products Co.). 25¢ [25¢]. Liquid. Available nationally.

O-Cedar (O-Cedar Corp., Chicago). 39¢ [26¢]. Liquid.

Foamclem (J.N.T. Manufacturing Co.). 94¢ [94¢]. Liquid.

Zit (Wilbert Products Co.). 45¢ [23¢]. Liquid.

The following two products were soapless-type cleaners, but contained alkaline builders:

Whisk (Whisk Co. of New York). 94¢ [16¢]. Powder.

Whisk Foam (Whisk Co.). 74¢ [74¢]. Liquid. For upholstery.

SOAP CLEANERS**ACCEPTABLE**

Tavern (Socony Vacuum Oil Co.). 59¢ [15¢]. Liquid. Available nationally.

Murphy's (Murphy-Phoenix Co.). \$1 [25¢]. Powder. Available nationally.

Old English (The A. S. Boyle Co.). 19¢ [10¢]. Liquid. For rugs. Available nationally.

Maid of Honor Cat. No.—6578 (Sears Roebuck). 44¢ plus postage [22¢]. Liquid. For rugs.

Super Crystals (Irwin-Newman Products Corp.). 25¢ [8¢]. Powder. General household cleaner.

Ward's Rug Cleaner Cat. No. — 4009 (Montgomery Ward). 45¢ plus postage [11¢]. Liquid.

Spotless (McLean Manufacturing Co.). 20¢ [3½¢]. Powder. General household cleaner.

Old English (A. S. Boyle Co.). 49¢ [25¢]. Liquid. For upholstery.

Rainbow Foam (C. W. Parker Co.). 85¢ [43¢]. Liquid. For upholstery.

Magicleaner (Magic Cleaner Corp.). 25¢ [25¢]. Liquid.

Miracle Foam (H. R. Davis Co.). 65¢ [33¢]. Liquid.

¹ For a list of AMC stores, see page 10.

NOT ACCEPTABLE

The following brands, marketed as "general household cleaners," were found to be strongly alkaline and with little foaming ability; they were therefore rated, "Not Acceptable" for rug and upholstery cleaning.

Johnson's (Johnson Products Co.). 60¢. Liquid.

Rad (Milrose Products Co.). 25¢. Paste.

SEWING MACHINES

Production of sewing machines has ceased for the duration, and stocks of new ones on retailers' shelves are practically exhausted. But excellent second-hand machines are still available; these can be very good buys, especially since there have been no basic changes in design of sewing machines for many years.

The numerous brand names mean little. Almost all domestic sewing machines are the product of four manufacturers: The Singer Sewing Machine Company, the White Sewing Machine Company, the National Sewing Machine Company and the New Home Sewing Machine Company. All but the first market their product under many names in addition to their own, and the same model frequently sells for less as a private brand than under the manufacturer's own name.

Generally, the most economical buy is a portable; the identical sewing head in a stationary model often costs a good deal more, the extra outlay going for furniture. Of course, if a machine is to see constant use, you may consider the convenience of a stationary model worth while.

Treadle-operated machines are generally \$20 to \$40 cheaper than a corresponding model with electric drive. For occasional use the treadle machine is perfectly satisfactory, though the added expense of an electric machine is probably worth while for an experienced operator who sews a good deal. A motor can be attached quite simply to a treadle machine, and it will give satisfactory service provided the machine is not the long-shuttle type.

Electric machines have the motor mounted for either belt or friction drive, or they have built-in motors with gear drive. Though more expensive, gear drive is best; friction drive is least satisfactory.

Most domestic machines today sew with a lock-stitch. The older chain-stitch machine has a simpler mechanism, but it does not lend itself well to special types of sewing, and the stitch unravels easily.

The lock-stitch machine uses two threads, the upper one fed from a spool, the lower from a bobbin. The needle draws the upper thread through the cloth and forms it into a loop. The lower thread passes through this loop to complete an interlocking stitch.

There are three types of bobbin or shuttle design used on lock-stitch machines. The "long-shuttle" variety produces considerable noise and vibration and is therefore less suited for use with an electric motor. But long-shuttle machines do an otherwise satisfactory job. The "rotary" machine is quiet and comparatively vibrationless, hence best suited to electric operation. The "oscillating-shuttle" causes some noise and vibration but it can be operated satisfactorily with electric drive. Both rotary and oscillating-shuttle types are known as "round bobbin" machines.

Of the features found only on newer models, the hinged presser foot, which automatically adjusts to different thicknesses of material, is worth having. It can be put on most old machines. However, the reverse-sewing action on new models is an overrated feature, and is seldom worth the extra cost.

SHOE POLISH

Since good shoe polish preserves leather and protects it against dirt and moisture, shoes should be polished regularly and often. An efficient polish spreads to a thin layer of protective wax on the shoe, dries smooth and can be buffed to a high shine; it should be able to eliminate minor scuff marks from the leather.

Paste Waxes are a combination of hard and soft waxes, plus dye, dissolved into paste form with a solvent like kerosene or turpentine. The hard wax forms a protective coating and buffs up to a high shine; the soft wax makes the polish easy to spread; the dye covers scuff marks and renews the color of the shoes; the solvent blends the mixture into a uniform paste that spreads evenly.

Paste waxes packed in flat metal cans have, in the past, been the most widely used and the most economical of all shoe polishes.

Neutral Creams polish but neither darken nor stain shoes. They are used most widely for natural colored leathers or for reds, greens or blues. They too have as their principal ingredients a mixture of hard and soft

waxes, dissolved in an organic solvent. But they also contain water, as well as soap to hold the water-insoluble wax particles and the water together in emulsion form. The more wax the cream contains and the higher the melting point of the wax, the more efficiently it will polish. Neutral creams are sold in tubes or bottles, some brands being packaged both ways. Bottled products generally are thinner creams containing less wax.

Liquid Polishes come in various colors, but chiefly in black and brown. Their composition is much like liquid floor wax—hard wax in water, emulsified with soap. Like cream polishes, their efficiency depends on the amount and hardness of the waxes present. But liquid waxes protect only as long as they are kept dry, since they are soluble in water. They could be made waterproof (like some floor polishes) if certain soaps were used in them. But since no solvent like kerosene or turpentine is present to spread the wax, there is danger that a waterproof liquid polish would build up too much wax and crack the leather of the shoe.

Scuff Polishes consist mainly of dyestuff in a solvent. A few, notably *Dyanshine*, contain small amounts of wax, but most of them contain no wax and are useful only to cover scuff marks. Since scuff polishes are sold interchangeably with other liquid polishes, however, they are grouped together in the ratings.

Each polish was tested for amount of total solids, amount of wax present, and its resistance to water, and the hardness of the wax as determined by its melting point.

From the *Reports*, February 1943.

SHOWER CURTAINS

A shower curtain should be water-repellent, colorfast to hot, soapy water and sunlight, capable of resisting the ravages of moisture, heat, sunlight and mildew. If the curtain is made of more than one piece of fabric, the seams should be strong. The rings at the top should be inserted in a reinforced strip or hem; the bottom should be adequately weighted. A guarantee of colorfastness is desirable.

Of the types of fabrics used for shower curtains, production of rubber sheeting and synthetic films like pliofilm is out for the duration; coated fabrics — a variety of materials coated with pyroxylin, synthetic resins, rubber, *Koroseal*,

332 SHOWER CURTAINS, LAUNDRY SOAP

etc.—are either off the market or scarce. But treated fabrics are plentiful, and they are the best in all-around utility.

Cotton broadcloth, rayon broadcloth, cotton and rayon mixtures, ducks, taffetas, etc., are treated with chemicals to make them water-repellent to various degrees. The chemicals used for treating often act as mildew preventives. Duck curtains can now be found in attractive patterns, mildew proofed and water resistant.

Treated curtains should be kept clean and spread to dry after use. Soap should not be allowed to dry on them, as mildew grows on the soap and attacks the fabric.

LAUNDRY SOAP

With the same amount of soap of the same type and with the same mechanical action, the same temperature and the same hardness of water, all soaps will wash clothes just about equally clean.

In choosing soaps, consider the hardness of the water and the fabric to be washed. Hard water contains large amounts of various minerals, and unless it is first softened, a great deal of soap is needed before suds can be formed. Water can be softened in many ways.

The ideal water softening agent is an "exchange system" such as Zeolite or Permutit. The initial cost of its installation is high and may not be feasible for many households, but a group of householders could install such a system. Running costs of the system are low, and it requires very little attention. Unfortunately, however, the material necessary for such an installation is not now available.

Next best is to soften the water each time it is used. This can be done either by removing the minerals (forming and removing the curd before the soap is added) or by using a softener which rinses out along with the soap. Of the two methods, the latter is preferable for several reasons; first, there is no curd to remove before soap is added; second, the softeners that do this job will not harm delicate fabrics; third, the rinse water will not have to be softened. The best softeners are sodium metaphosphate (*Calgon*) and tetra sodium pyrophosphate (*Co-op Water Softener*).

Instead of using a special softener before adding soap to the water, the job can be done with a "built" laundry soap. The builder in a soap is nothing else but a water softener. There are two kinds of built soaps—

those that use sodium metaphosphate or tetra sodium pyrophosphate to form soluble compounds, and those containing soda ash, borax, silicates, etc., which soften the water by curd formation.

All delicate fabrics, such as silks, woolens, rayons and light-weight cottons and linens, should be washed at wrist temperature (around 100° F.) in soaps without builder, or an efficient meta- or pyrophosphate built soap should be used.

Heavy cottons and linens, either white or dyed (provided colors are guaranteed washable) can be washed with any built soaps.

All soaps tested met purity requirements regarding the presence of free alkali, but some had an excessive amount of filler (inert, insoluble material). Filler serves no purpose in a soap except that it acts as a slight abrasive. In excessive amounts it will harm delicate fabrics; in any case its presence means that you get less soap for your money. In computing prices the "price per pound of dry soap" excludes filler, moisture and other non-soap ingredients and is based on the actual amount of soap in the box. In built soaps, builder was considered part of the soap.

For ratings see pages 334 and 335.

From the *Reports*, January 1943.

SPOT REMOVERS

Despite claims that some spot removers will "remove all stains," their use is actually very limited. Ordinary spot removers are useful for one thing: to remove stains caused by fat or grease. Other types of stains must be removed by other means (see page 340).

Spot removers may safely be used only in small quantities; use of large amounts of solutions presents danger of injury from toxic fumes or inflammable vapors. Most of those on the market, are made of naphtha, carbon tetrachloride, or a mixture of the two. Naphtha is similar to gasoline; it ignites with very little provocation. Carbon tetrachloride is non-inflammable, but it is highly volatile and gives off fumes which are injurious when inhaled.

When the two products are mixed, the result won't burn at first. But since carbon tetrachloride is more volatile than the naphtha, it tends to evaporate first,

LAUNDRY SOAPS: COMPARATIVE PRICES

(In order of increasing cost per pound of dry soap within each group)

BRAND AND MANUFACTURER OR DISTRIBUTOR		Claimed Net Weight (Oz.)	Price Per Package (¢)	Cost Per Dry Pound (¢)
Flakes without builder				
White Sail Flakes (A&P).....	12½	15	19.4	
Ward's Thin White Flakes Cat. No.—2953 (Montgomery Ward).....	12½	16*	20.9	
Kroger's Allure Flakes (Kroger Grocery & Baking Co.).....	12½	18	21.0	
Coop Pure Soap Flakes Red Label (Eastern Cooperative Wholesale, Brooklyn)	5 lb.	\$1.05	21.5	
Blue Label Flakes (Cooperative Distributors, NYC)	12½	18*	23	
Lux (Lever Bros.).....	12½	24	31.5	
Ivory Flakes (Procter & Gamble).....	12½	24	31.8	
Flakes with Tetra Sodium Pyrophosphate				
Manhattan Flakes* (Manhattan Soap Co., NYC — Available at A&P)	4 lb. 10 oz.	39	11.7	
Coop General Purpose Soap Flakes (Eastern Cooperative Wholesale)	5 lb.	98	20.8	
Flakes or Chips with Builder (other than Tetra Sodium Pyrophosphate)				
Ward's Soap Chips* Cat. No.—2951 (Montgomery Ward).....	22	20*	14.7	
20 Mule Team Borax Soap Chips (Pacific Coast Borax Co.).....	22	21	15.8	
Kroger's Avalon Flakes* (Kroger Grocery & Baking Co.).....	21½	22	16.3	
Fels-Naptha Chips (Fels & Co.).....	21	19	16.7	

Chipso Condensed Flakes ^a (Procter & Gamble).....	21½	21	16.9
I.G.A. Fine Quality Flakes (Independent Grocers' Alliance).....	21½	23	17.8
Blue Label Chips (Cooperative Distributors).....	22	24*	18.5
Kirkman's Double Duty Flakes (Colgate-Palmolive-Peet).....	18	21	20.0
Granules without builder			
Ivory Snow (Procter & Gamble).....	12½	24	29.0
Granules with Tetra Sodium Pyrophosphate			
Kroger's Avalon Granulated Soap ^a (Kroger Grocery & Baking Co.).....	4 lb. 5 oz.	49	13.5
Ward's Soap Granules ^b (Cat. No.—3992 (Montgomery Ward).....	24	18*	15.0
Coop Granulated Soap Blue Box (Eastern Cooperative Wholesale).....	5 lb.	69	15.4
Super Suds (Colgate-Palmolive-Peet).....	24	21	15.7
Scotch Granulated Soap (White King Soap Co.).....	3 lb.	44	16.9
Coop Granulated Soap Red Box (Eastern Cooperative Wholesale).....	5 lb.	78	17.0
Kirkman's Granulated Soap (Colgate-Palmolive-Peet).....	21½	22	18.2
I.G.A. New Formula Grains ^a (Independent Grocers' Alliance).....	24	23	18.8
Granules with other builders			
White Sail Soap Grains (A&P).....	4 lb. 5 oz.	49	12.5
Oxydol ^c (Procter & Gamble).....	4 lb. 5 oz.	59	15.8
Selox ^c (Procter & Gamble).....	17½	15	16.3
Blue Label Granules ^a (Cooperative Distributors).....	24	20*	16.3
Chipso Granules (Procter & Gamble).....	21½	21	16.9
Rinso ^c (Lever Bros.).....	24	22	16.9
Duz ^c (Procter & Gamble).....	21½	22	17.7
Silver Dust (Lever Bros.).....	21½	22	18.9
Klek ^c (Colgate-Palmolive-Peet)	9	10	21.0

^a Based on dry soap actually present. Inert filler, moisture, towels, glasses, and other non-soap materials excluded.
^b Contains an excess of inert filler. ^c Short weight. * Pins postage.

leaving a liquid with all the dangers inherent in naphtha.

Stoddard solvent, like naphtha, is a petroleum distillate. But it is much less volatile, and has a considerably higher flash point, so that Stoddard solvent is much less hazardous for home use than is naphtha. But, like other distillates of this type, it must not be used in the presence of an open flame because of danger from fire.

Precautions: Purchase non-inflammable spot removers if possible. If these are used in small amounts and in well ventilated places they are considered safe. If you can't find one free from danger of fire, follow these precautions to insure maximum safety:

1. Limit use to small areas of fabric at a time.
2. Work in a shady spot out-of-doors if possible. If not, work near an open window, away from all flame.
3. Use only a very small amount of fluid at a time. Don't pour the cleaner into an open dish; dampen your cloth directly from the bottle.
4. Don't buy spot removers in large quantities; storing large amounts means running unnecessary risks.
5. Keep the bottle of fluid stoppered except when you are actually using it.
6. Avoid containers which are likely to tip over or break. Wide, low containers, preferably metal, are best.

How to Clean: It's futile to try to remove a spot from a garment which is generally soiled. But if you get a grease stain on an otherwise clean garment, here is a good procedure to follow:

1. Not all fabrics and not all dyes can "take" spot removal. Before you start working on the spot, try using the solvent on some inconspicuous part of the garment.
2. Place a clean blotter or some other absorbent material under the stain to be removed.
3. Moisten a cloth with the spot remover. Use material similar to that being cleaned, or a clean, absorbent, white cloth.
4. Use light strokes, and work from the center of the stain, spreading in straight lines outward beyond its edge. Work rapidly, using only a small amount of cleaner at a time. Keep rubbing outward from the center until there is no clear line between the moistened spot and the surrounding area.
5. Remove the last traces of the solvent by rubbing

with a dry cloth, and hanging up the garment, preferably in the open air.

6. If your first attempt is not successful, go through the same procedure again, using a clean section of the blotter, and a clean cloth.

Sometimes the greasy portion of the stain is removed by this process, but a water ring remains behind. Try these two methods for removing such rings:

1. Rub the material against itself, then rub the edge of the stain lightly with your fingernail or the edge of a spoon or coin.

2. Hold the ringed area over the steaming spout of a tea kettle which has first been covered lightly with a small piece of cheesecloth. Then shake the fabric dry and press it.

The brands below are listed in four categories, depending upon their tendency to inflammability. Within each group, they are listed in order of price per fluid ounce, cheapest first. CU considers those listed as "Inflammable" to be "Not Acceptable" for home use.

From the *Reports*, July 1943.

ACCEPTABLE

NON-INFLAMMABLE

The following are apparently carbon tetrachloride or similar products. Listed according to increasing price per fluid ounce. Figure in parentheses is the price per fluid ounce.

Co-op Cleaning Fluid (Eastern Cooperative Wholesale).

1 pt., 29¢ (1.8¢) Available in the East in Cooperative stores.

Shell Spot Remover (Shell Oil Co.). 1 pt., 40¢ (2.5¢). Available on the West Coast.

Macy's Cleaning Fluid (R. H. Macy & Co., NYC). 1 qt., 89¢ (2.8¢). Available at Macy's in New York City.

Ever Blum (D. Blum & Co.), 1 qt. 95¢ (3.0¢). Nationally available.

Eneringe Fireproof (Cummer Products Co.). 3 fl. oz., 10¢ (3.3¢). Nationally available.

Spot Remover (Cooperative Distributors, Inc., NYC). 1 pt., 58¢ (3.6¢). Available in New York City and by mail order.

Milo (Marshall Field, Chicago). 14 fl. oz., 50¢ (3.6¢). Available at Marshall Field in Chicago.

(Continued next page)

ACCEPTABLE—CONT'D

Macy's Spot Remover (R. H. Macy). 8 fl. oz., 37¢ (4.6¢). Available at Macy's in New York City.

Du Pont Dry-Clean (E. I. Du Pont de Nemours & Co.). 8 fl. oz., 49¢ (6.1¢). Nationally available.

Elkay's Klens-All (United Drug Co.). 4 fl. oz., 25¢ (6.3¢). Nationally available.

Carbona (Carbona Products Co.). 1½ fl. oz., 10¢ (6.7¢).

SEMI-INFLAMMABLE

The following are mixtures of various inflammable petroleum products and non-inflammable products such as carbon tetrachloride. Listed according to increasing price. Figure in parentheses is the price per fluid ounce.

Bloomingdale's Dry Cleaning Fluid (Bloomingdale's, NYC). 1 qt. 75¢ (2.3¢). Available at Bloomingdale's in New York City.

Standard Cleaning Fluid (Standard Oil Co. of California). 1 pt., 37¢ (2.3¢). Available on the West Coast.

Old English Cleaning Fluid (The A. S. Boyle Co.). 1 pt., 39¢ (2.4¢). Nationally available.

Dart (The Slick Shine Co.). 4 fl. oz., 10¢ (2.5¢). Nationally available.

Nok-Spot (Bloomingdale's, NYC). 1 pt., 59¢ (3.7¢). Available at Bloomingdale's in New York City.

"Wonder" (Wonder Laboratories, Cleveland). 4 fl. oz., 15¢ (3.8¢). Purchased in Boston.

Magic (Hamilton Products Co., Inc.). 8 fl. oz., 35¢ (4.4¢). Not to be confused with *Magic "Certified"* put out by Barnell Laboratories, which is inflammable. Nationally available.

Cleveland's Superb Fabric Cleaner (Alden T. Cleveland Mfg. Co., Boston). 8 fl. oz., 35¢ (4.4¢).

Stop Spot (Wilco Co., Los Angeles). 8 fl. oz., 50¢ (6.3¢). Available on West Coast.

Cle (Guy Parker, NYC). 12 fl. oz., 84¢ (7¢). Available in New York City.

STODDARD SOLVENT

The following appear to be Stoddard Solvent. Listed according to increasing price. Price in parentheses is the price per fluid ounce.

Gimbel's Dry Cleaner. (Gimbel Bros.). 2 gal., 84¢ (0.3¢).

ACCEPTABLE—CONT'D

A combustible mixture, should not be stored in the house in such large quantities. Available in Gimbel stores.

Tavern Dry Cleaner (Socony-Vacuum Oil Co.). 2 gal., \$1.29 (0.5¢). A combustible mixture should not be stored in the house in such large quantities. Nationally available.

Renuzit (Radbill Oil Co.). 1½ fl. oz., 10¢ (8.9¢). Available East of the Mississippi, but not in Alabama, Louisiana, Mississippi or Georgia.

Des-Tex (Research, Inc.). 1 pt., 75¢ (4.7¢). Nationally available.

Brush Top (Arthur W. Hahn Products). 1½ fl. oz., 15¢ (13.3¢). This had a much higher flash-point than the others; somewhat safer to use. Nationally available.

NOT ACCEPTABLE**INFLAMMABLE**

Listed in alphabetical order. The price in parentheses is the price per fluid ounce.

Aimcee (Associated Merchandising Corp.¹) 8 fl. oz., 29¢ (3.6¢). 2 gal., \$1. (0.4¢).

De Luxe (Midway Chemical Co.) 4 fl. oz., 10¢ (2.5¢).

Difficult Stains (D. Blum & Co.). 1 pt., 69¢ (4.3¢).

Energine Inflammable (The Cummer Products Co.). 8 fl. oz., 34¢ (4.3¢).

Fair Special Spot Remover (The Fair, Chicago). 8 fl. oz., 29¢ (3.6¢).

Justrite (Walgreen Co.). 1 qt. 55¢ (1.7¢).

Karith (Karith Chemical Co.). 1 pt., 45¢ (2.8¢).

Magic "Certified" (Barnell Laboratories). 1 pt., 11¢ (0.7¢). Not to be confused with *Magic* put out by Hamilton Products Co., Inc., which is semi-inflammable.

Nacto (Nacto Cleaner Corp.). 8 fl. oz., 55¢ (6.9¢).

Peacock (Peacock Cleaners and Dyers, Ltd.). 1 pt. 30¢ (1.9¢).

Pert (Enoz Chem. Co.) 4 fl. oz., 15¢ (3.8¢). 1 pt., 54¢ (3.4¢).

Premier (Universal Co.). 1 pt., 11¢ (0.7¢).

Pure Benzine (Criterion Chemical Co.). 8 fl. oz., 15¢ (1.9¢).

¹ For a list of AMC stores, see page 10. (Continued next page)

LAUNDRY SOAPS: COMPARATIVE PRICES

(In order of increasing cost per pound of dry soap within each group)

BRAND AND MANUFACTURER OR DISTRIBUTOR	Claimed Net Weight (Oz.)	Price Per Package (¢)	Cost Per Dry Pound ¹ (¢)
Flakes without builder			
White Sail Flakes (A&P).....	12½	15	19.4
Ward's Thin White Flakes Cat. No.—2953 (Montgomery Ward).....	12½	16*	20.9
Kroger's Allure Flakes (Kroger Grocery & Baking Co.).....	12½	18	21.0
Coop Pure Soap Flakes Red Label (Eastern Cooperative Wholesale, Brooklyn)	5 lb.	\$1.05	21.5
Blue Label Flakes (Cooperative Distributors, NYC).....	12½	18*	23
Lux (Lever Bros.).....	12½	24	31.5
Ivory Flakes (Procter & Gamble).....	12½	24	31.8
Flakes with Tetra Sodium Pyrophosphate			
Manhattan Flakes ² (Manhattan Soap Co., NYC — Available at A&P)	4 lb. 10 oz.	39	11.7
Coop General Purpose Soap Flakes (Eastern Cooperative Wholesale)	5 lb.	98	20.8
Flakes or Chips with Builder (other than Tetra Sodium Pyrophosphate)			
Ward's Soap Chips ³ Cat. No.—2951 (Montgomery Ward).....	22	20*	14.7
20 Mule Team Borax Soap Chips (Pacific Coast Borax Co.).....	22	21	15.8
Kroger's Avalon Flakes ³ (Kroger Grocery & Baking Co.).....	21½	22	16.3
Fels-Naptha Chips (Fels & Co.).....	21	19	16.7

Chipso Condensed Flakes ¹ (Procter & Gamble).....	21½	21	16.9
I.G.A. Fine Quality Flakes (Independent Grocers' Alliance).....	21½	23	17.8
Blue Label Chips (Cooperative Distributors).....	22	24*	18.5
Kirkman's Double Duty Flakes (Colgate-Palmolive-Peet).....	18	21	20.0
Granules without builder			
Ivory Snow (Procter & Gamble).....	12½	24	29.0
Granules with Tetra Sodium Pyrophosphate			
Kroger's Avalon Granulated Soap ³ (Kroger Grocery & Baking Co.).....	4 lb. 5 oz.	49	13.5
Ward's Soap Granules ^{2,3} (Cat. No.—3992 (Montgomery Ward).....	24	18*	15.0
Coop Granulated Soap Blue Box (Eastern Cooperative Wholesale).....	5 lb.	69	15.4
Super Suds (Colgate-Palmolive-Peet).....	24	21	15.7
Scotch Granulated Soap (White King Soap Co.).....	3 lb.	44	16.9
Coop Granulated Soap Red Box (Eastern Cooperative Wholesale).....	5 lb.	78	17.0
Kirkman's Granulated Soap (Colgate-Palmolive-Peet).....	21½	22	18.2
I.G.A. New Formula Grains ³ (Independent Grocers' Alliance).....	24	23	18.8
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336 SPOT REMOVERS

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From the *Reports*, July 1943.

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(Continued next page)

ACCEPTABLE—CONT'D

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Renuzit (Radbill Oil Co.). 1½ fl. oz., 10¢ (8.9¢). Available East of the Mississippi, but not in Alabama, Louisiana, Mississippi or Georgia.

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Energine Inflammable (The Cummer Products Co.). 8 fl. oz., 34¢ (4.3¢).

Fair Special Spot Remover (The Fair, Chicago). 8 fl. oz., 29¢ (3.6¢).

Justrite (Walgreen Co.). 1 qt. 55¢ (1.7¢).

Karith (Karith Chemical Co.). 1 pt., 45¢ (2.8¢).

Magic "Certified" (Barnell Laboratories). 1 pt., 11¢ (0.7¢). Not to be confused with *Magic* put out by Hamilton Products Co., Inc., which is semi-inflammable.

Nacto (Nacto Cleaner Corp.). 8 fl. oz., 55¢ (6.9¢).

Peacock (Peacock Cleaners and Dyers, Ltd.). 1 pt. 30¢ (1.9¢).

Pert (Enoz Chem. Co.) 4 fl. oz., 15¢ (3.8¢). 1 pt., 54¢ (3.4¢).

Premier (Universal Co.). 1 pt., 11¢ (0.7¢).

Pure Benzine (Criterion Chemical Co.). 8 fl. oz., 15¢ (1.9¢).

¹ For a list of AMC stores, see page 10. (Continued next page)

NOT ACCEPTABLE—CONT'D

Ritz (Nu Shoe Co.). 6 fl. oz., 19¢ (3.2¢).

Safeway Brush Top (Safeway Chemical Co.). 1½ fl. oz., 10¢ (8.9¢). 5 fl. oz., 25¢ (5¢).

West's Kleenzit (West Chemical Co.). 1 pt., 65¢ (4.1¢).

Wilson Cleaner (Wilson Chemical Co.). 8 fl. oz., 29¢ (3.6).

SPOT AND STAIN REMOVAL

For successful removal of spots and stains, first consider the stain and the fabric. Otherwise you may use an agent which will "set" the stain permanently or damage the fabric. Remove stains when they are fresh. Experiment with a cleaning agent first on unexposed portions of material. Use agents sparingly; work rapidly.

Cotton and linen should never be treated with strong acids. If dilute acids are used, they must be neutralized afterward with a weak alkali like ammonia water, and removed by thorough rinsing. Alkalies and hot water may be used, but materials should not be exposed to them for too long a time. Bleaching agents should be used sparingly, never in concentrated form or for extended periods.

Wool and silk can be treated with dilute acids, except nitric; but strong alkalies, washing soda, strongly alkaline soap or very hot water must be avoided. Excessive rubbing damages both silk and wool.

Rayon fabrics must be handled very gently, since they become weak when wet. Dilute acids are generally not harmful, but strong acids, bleaching agents or alkaline solutions must not be used. Never use solutions containing acetone, chloroform, or ether on acetate rayon; never use very hot water on rayon.

Colored fabrics should be treated rapidly and rinsed thoroughly, because chemicals strong enough to remove stains will usually attack dyestuffs. If the color changes shade when treated with an acid, the original color can often be restored with a weak alkali like ammonia solution or ammonia fumes. Acetic acid often restores a color changed by alkalis.

In general there are three types of cleaning agents: **absorbents, solvents and bleaches.**

Condensed from U.S. Dep't of Agric's Consumers Guide.

ABSORBENTS

Fuller's earth, cornmeal, chalk are harmless to all fibers and easy to apply. For best results spread on the spot when the stain is fresh or still moist. The absorbent acts like blotting paper in taking up the stain.

SOLVENTS

Use water wherever possible. Spots even on unwashable materials can sometimes be sponged off with water. Boiling water poured from a height of three or four feet is especially effective for removing fresh coffee, tea and fruit stains from colorfast or white cotton or linen material. Hold stained portion taut over a bowl with an elastic band or string.

Carbon tetrachloride is the safest of grease solvents. Gasoline, naphtha, benzene, acetone and ether should never be used in the home in large quantities. When used for small stains, be sure to keep all flames or sparks away from them, and if possible, use them out of doors. Turpentine is useful for paint stains.

When applying grease solvents, or when removing readily dissolved stains, use pad and sponge method. Brush off all dirt. Turn stained material inside out. Place it on a clean absorbent pad. Dip sponging cloth in cleaning fluid, press out excess moisture, then apply to stain in light strokes, working from the outside towards the center of the spot. Change absorbent pad and sponge frequently. When treating colored materials, use a sponge of the same material if possible.

To avoid rings: Spread or "feather" the liquid into the fabric surrounding the stain until there is no definite edge where the material dries. Do not use too much solvent at a time. Blow on stain when working. Brush material with a dry rag. Finish drying process by hanging material in stiff breeze or before electric fan. Use same type of material for sponge as the stained material. Work rapidly, but get all stain out.

To remove water rings: Rub edge of ring lightly with fingernail or edge of spoon. Or apply steam; tie

cheesecloth over spout of teakettle, bring water to a boil in the kettle, and hold ringed spot over the spout until it is moist. Shake dry and press.

BLEACHES

Sunlight is the simplest and safest. Other bleaches in addition to household bleach (sodium hypochlorite) include lemon juice, lemon juice and salt, acetic acid, ammonia, hydrogen peroxide, hydrosulfites (photographer's "hypo"), oxalic acid.

Acetic acid solution: Add 2 tablespoons of 5% solution to a quart of water.

Ammonia: Do not use ordinary household ammonia; get 10% ammonium hydroxide, chemically pure. For delicate fabrics dilute to half strength.

Hydrogen peroxide: Buy solution used for medical purposes; alkalize it just before using with a few drops of ammonia. This mild bleach may be used on silk and wool as well as on cotton and linen.

Hydrosulfites: These come in powdered form. Keep dry, in tightly closed cans. To use, moisten and work directly on stain, or dissolve in water—one teaspoon to a cup of water. These compounds will remove many non-greasy stains. Use on colors only after testing; then work rapidly and rinse thoroughly.

Oxalic acid (poison): Buy from drugstores in crystal form. Dissolve as many crystals as possible in luke-warm water. Keep in tightly corked bottle. Never allow to dry on fabric. Rinse first and then neutralize acid with ammonia solution.

When any bleach is used, the work must be done rapidly. For stubborn stains, use one of these methods:

Bowl method: Stretch the material over a bowl of lukewarm water, holding it in place by elastic band. If bleach is soluble in water, moisten stain first with water, then apply the agent with a medicine dropper. If acid solution is applied first, follow immediately by alkaline solution—or vice versa. Use a separate medicine dropper for each solution. After the spot has been removed, rinse material thoroughly.

Rod method: Place stained portion on absorbent pad. Apply alkali and then acid with glass rod with blunted ends. Rinse thoroughly.

• BLOOD STAINS

Always use cold water first.

Washable cotton and linens: Soak in cold, wash in hot water.

Delicate fabrics: Sponge with cold or lukewarm water. To remove last traces of blood stain, sponge with alkaline hydrogen peroxide.

Heavy materials (blankets, etc.): Make a paste of raw starch and cold water. Apply to stain and brush off when dry. Repeat if necessary.

• FRUITS AND BERRIES

Washable cotton and linen: Use boiling water. Then moisten stain with lemon juice; put in bright sunlight. For blue-gray stain which does not come out with boiling water, treat with oxalic acid, then ammonia solution, then boiling water, using bowl method.

Silk and wool and colored fabrics: Spread material over bowl of steaming hot water to which a few drops of ammonia have been added. Apply hydrogen peroxide with medicine dropper at about five minute intervals. Test colors first.

• GRASS, DANDELIONS, OTHER FOLIAGE

Washable materials: Use hot water, soap; rub stain vigorously. On white cotton and linen, bleach out remaining stain with household bleach.

Other fabrics except acetate rayon: Use ether or wood or denatured alcohol, pad method. (Alcohol affects some dyes. Experiment first).

• GREASE AND OILS

Always scrape off as much grease as possible from stained fabric first.

Washable materials: Wash with warm water and yellow laundry soap.

Absorbents are effective only on oil and grease spots that are not mixed with dirt or metal. They are convenient to use on rugs and other heavy materials.

Delicate materials: Spread paste of white absorbent powder and a solvent over spot. Or use pad method with grease solvent; use small quantities of solvent at a time, and rub spot with clean cloth until thoroughly dry.

(Continued next page)

• INK

(Chemical composition of inks varies. Some are impossible to remove.)

Marking ink (type which must be exposed to sun or ironed before marked article is washed):

White cotton and linen: Use household bleach—bowl method. Then soak in ammonia solution.

Writing ink: Try several methods; start with the simplest and the one least likely to injure a fabric.

Absorbent: Work absorbent around with blunt instrument. Renew absorbent when it becomes soiled. When dry absorbent no longer removes ink, make it into a paste with water, and apply again.

Soap and water are often satisfactory if material is washable.

Milk: Soak stains for a day or two, changing the milk as it becomes discolored.

Oxalic acid: Soak stains for a few seconds in a saturated solution of oxalic acid (acid crystals dissolved in as little water as possible), rinse in clear water, and then in water to which a few drops of concentrated ammonia have been added.

Household bleach: Use on white cotton and linen only.

Commercial ink removers: Follow directions carefully and rinse material thoroughly after treatment.

• IRON RUST

White materials: Put stained fabric over bowl of boiling water; squeeze lemon juice on the spot. Allow juice to remain for a few minutes. Rinse. Repeat the process. Or, sprinkle the stain with salt, moisten with lemon and place in the sun. Add more juice if needed.

Colored materials: Experiment first with unexposed portion before using above methods.

• MILDEW

Mildew spots must be treated when fresh to avoid injury to the fabric.

Washable fabrics: Wash with soap and water and dry in the sun. If slight stains remain, soak in sour milk overnight, bleach in sun, or moisten stain with lemon juice and salt and bleach in sun. Old stains on white linen and cotton can be bleached out with household bleach.

• PAINTS

Oil paints, varnishes, enamels

Washable materials: Remove fresh stains with soap and water and vigorous rubbing. Or sponge stain or wash whole article in turpentine. For old stains, try rubbing lard into the stain and then washing with soap and water. Or moisten stain with ammonia solution, sprinkle with turpentine, roll article up for 15 to 20 minutes. Soak for several hours, then wash with warm soap and water.

Delicate fabrics: Sponge or soak entire article in carbon tetrachloride, chloroform or benzine.

Alcohol stains

Washable fabrics: For fresh stains, use soap and water. For old stains, soak stain for half an hour in strong ammonia and then wash.

Delicate fabrics: Use wood or denatured alcohol, pad method.

Water color paints

Washable materials: Use soap and water.

Delicate fabrics: Sponge stain with turpentine to remove water color, then with benzene to remove turpentine. Or dip stain in gasoline.

• SCORCH

Washable cotton and linen: Wet spot with water and expose to sun as long as necessary.

Any white fabric: Dampen a white cotton cloth with hydrogen peroxide and place over the stain. Place a clean dry cloth over it and then press with a medium warm iron. Do not iron directly on the cloth moistened with peroxide, or rust stains on the garment will result.

Woolen material: Brush lightly with emery paper.

• WALL CLEANERS

When the paint on walls is soiled, wall cleaners can do a good renovating job. But cleaning walls is hard, tedious work. Do not try to clean a whole wall at once; wash only a small portion at a time and rinse it before it dries. Start at the top of the wall and work downward; other-

wise the dirty water will streak the cleaned portions. Use an up-and-down motion in washing.

Liquids, pastes and powders are sold for cleaning water-resistant paints.

Liquids are generally solutions of soap with or without water-softening chemicals, or non-soap cleansers like trisodium phosphate (TSP), washing soda or sodium silicate. Those sold in concentrated form are usually cheaper than liquids meant to be used without dilution. However, making your own cleaner at home is much cheaper than either.

To make a cleaner for any water-resistant painted surface, dissolve a soap containing tetrasodium pyrophosphate water softener (See Laundry Soaps, page 332) in just enough water to hold the suds. Do not apply to calcimined ceilings; use wall paper cleaner on these.

A very cheap and satisfactory cleaner for flat paint is made by dissolving a tablespoonful of trisodium phosphate (available in paint stores as TSP or in grocery stores under the trade name *Oakite*) in a gallon of water. TSP removes the gloss from glossy paints.

An emulsion of kerosene in water also cleans walls, but less satisfactorily than do soap solutions. Though kerosene helps to loosen greasy soil, it is difficult to rinse off the walls completely, and the residue tends to pick up dirt and dust.

Paste cleaners are usually similar to soap-type liquids, except that enough soap is present to produce a paste consistency. Their only advantage is for cleaning shelves or Venetian blinds when the surrounding area is not to be cleaned. Then the fact that they do not drip is an asset.

A few paste cleaners resemble automobile cleaner-polishes. They generally consist of a dissolved wax combined with soap and a mild abrasive. They are particularly useful on doors, window sills and other glossy surfaces that are much handled, since the wax forms a protective dirt-resistant film.

Powdered wall cleaners are merely the solid ingredients found in liquids or pastes; the user does the mixing. Less expensive than the other two types of commercial products, they still cost more than the raw materials for a home-made cleaner.

Synthetic cleaners (sulfated fatty alcohols, alkyl sulfonates, aerosols, igepons, etc.), available as soapless rug and upholstery shampoos, are ideal for cleaning enameled and flat-painted surfaces. Though these are not generally labeled as wall cleaners, they are widely sold as such in wholesale supply houses. For cleaning walls, use the liquid, diluted as indicated on the instructions, rather than the suds. (See Rug and Upholstery Shampoos, page 326).

Rust removal: Rust stains generally cannot be removed by ordinary cleansers. A 10% solution of oxalic acid (available in drug stores and chemical houses) does a good job quickly. But remember that oxalic acid is a strong poison. Do not let the solution come into contact with broken skin (it's safest to wear rubber gloves); be sure that none of the solution drips where it might come into contact with food. Do not let oxalic acid touch kitchen sinks or other objects made of vitreous enamel; such substances are attacked by the acid.

Oxalic acid also has a bleaching action. Although this does not affect most paints, which are pigments, test the solution on a concealed spot before using it. Never let it come into contact with clothing, drapes or other colored fabrics.

After use, be sure that all the oxalic acid is thoroughly rinsed from the object on which it was used.

Wallpaper Cleaners: Commercial wallpaper cleaners can be used for non-washable wallpaper, or you can make your own from simple ingredients. Commercial products are putty-like in consistency and must be kneaded into soft balls before use. When rubbed over the soiled surface, they loosen and take up the dirt.

To make a paper cleaner at home, mix $2\frac{1}{4}$ lb. flour, 1 lb. salt, 1 oz. kerosene or mineral oil and $1\frac{1}{2}$ qts. water to form a smooth batter.

Calcimined walls and ceilings and non-washable window shades can also be cleaned with such a mixture.

From the *Reports*, July 1943.

Automobiles & Supplies

No new passenger cars will be made until the European phase of the war is over, and then no one knows how long the reconversion of auto plants will take. Meanwhile, the tire situation has reached the critical stage. There is no likelihood that in 1944 any but a fraction of the demand can be met by the production of synthetic rubber tires. Most car owners will be dependent upon recapping their old tire carcasses again and again. Preliminary reports indicate that synthetic rubber tires do not stand up well compared to tires made with natural rubber.

Because parts and repairs are essential to keep the available supply of cars moving, OPA has set ceilings on practically all types of parts—new, rebuilt and used. Service charges for installation of parts and repairs are also covered by maximum prices.

There will be plenty of anti-freeze for passenger cars, with the bulk of the supply consisting of ethyl alcohol. Some of the permanent types made of ethylene glycol will also be available although commercial cars get first call on the supply.

Used cars have soared in price with the supply below normal. There are not ceilings on all used cars and prices are pretty much what the sellers want to get. With the supply shrinking rapidly, ceilings may be imposed by OPA. It has already put dollars-and-cents ceilings on the price of used 1942 model cars.

ANTIFREEZE

Ethylene glycol or alcohol antifreeze preparations may be difficult to obtain because both are in great demand for war industries.

Ethylene glycol is the best antifreeze for general use, but it is expensive. If your radiator is not leakproof, denatured ethyl alcohol, which costs much less, is preferable. If you use alcohol, try to get denatured grain alcohol, since antifreeze made from methyl alcohol (methanol) is poisonous. But if the latter is the only kind of antifreeze available, try to guard against poisonous vapors by making sure that the cooling system is leakproof, and that the water never gets overheated.

Government regulations require that antifreeze labels indicate the number of gallons of the product which must be added to each gallon of water to reduce the freezing point of the mixture to 10 degrees below zero, Fahrenheit. An earlier regulation, calling for the labeling of antifreezes in terms of "Standard" or "Substandard" has been withdrawn; in terms of the new regulation, the old requirement for "Standard" is $\frac{3}{4}$ gallon antifreeze to a gallon of water.

When ethylene glycol is used, the cooling system thermostat of the car should be set no higher than 170° F.; with alcohol the thermostat must be set no higher than 155° F., or the alcohol will evaporate rapidly. Since the lower temperature may impair the performance of hot-water auto heaters, ethylene glycol antifreeze is preferable for cars equipped with heaters.

Some of the alcohol antifreezes have non-volatile oils added to serve as evaporation retarders. These retarders are of limited effectiveness, but antifreezes containing them are better buys at about the same price than antifreezes without evaporation retarders.

Don't use antifreeze solutions that contain calcium chloride, magnesium chloride, sodium chloride (table salt) or kerosene. Their manufacture has been prohibited by WPB, but some may still be available at stores or service stations. Use of such solutions can cause irreparable damage to radiators, ignition systems and rubber connections. Read the label to find out what the antifreeze is before you use it; if you can't find out, don't use it.

Both ethylene glycol and alcohol antifreezes can be preserved from one year to the next. Provided the cooling system of your car is leakproof, it is best to leave ethylene glycol in the radiator over the Summer. If the radiator is not leakproof, or if you are using alcohol, drain out the antifreeze, test it to be sure it is worth saving, and store it in tightly corked glass or earthenware jugs, carefully labeled.

Before using it in the Fall, re-test the solution and add more of the same antifreeze if necessary. Rustiness does not diminish the effectiveness of the solution, but do not pour any of the sediment from the bottom of the jug into the radiator. Rust inhibitor should be added to antifreezes before they are used for a second season.

Thorough cleaning of the radiator is advisable before the antifreeze is added. Also tighten all hose connections and have worn ones replaced. Have the water pump and cylinder head nuts tightened. (If the cylinder head gaskets are defective, it is especially important to have them replaced before adding ethylene glycol.)

When filling a radiator containing antifreeze, keep the water level about one inch below the opening of the overflow pipe (two inches if the motor is cold).

BATTERY "DOPES"

Battery recharging cannot be eliminated by any of the "battery dopes" on the market. The basic claim for these "special" electrolytes is that they dissolve hardened lead sulfate which has formed on battery plates, increasing the battery's life or eliminating the need for supplementary recharging. Most of them consist of epsom salt, Glauber's salt or some similar substance. None of them either affects the solubility of lead sulfate or produces electric current chemically.

Sulfation (formation of lead sulfate on plates) can be retarded only by keeping the battery fully charged. When your car is used only occasionally, it will have to be charged at a service station or at home (if you have the necessary equipment).

From the *Reports*, June 1943.

GASOLINE "DOPES"

No commercial gasoline "dope" will stretch your gas ration, concludes the National Bureau of Standards after testing 150 brands of gasoline dopes sold throughout the country. There is no basis to the claims that such dopes will promote easy starting, improve vaporization, control vapor pressure, eliminate knocking, increase engine power, remove or prevent carbon deposits or increase mileage.

In its report the Bureau points out,

"... Any device that will induce or compel the user to run on a leaner mixture [of fuel] often will have the obvious advantages of reducing the fuel consumption, reducing the carbon deposit and thus the tendency to knock, and improving the general performance of the vehicle at the expense perhaps of some little delay in warming up the engine in cold weather.

"Fuel dopes are frequently accompanied by instructions to use a leaner mixture. When such instructions have been followed, they have sometimes seemed to accomplish favorable results . . . It is safe to say, however, that an adjustment of the carburetor would have accomplished the same or better results . . . "

From the *Reports*, June 1943.

TIRE CARE

For maximum tire life, keep car speeds low.

Accelerate slowly; shift into high gear at 10 mph. Take corners slowly; slow down to a stop gradually. If brakes lock the wheels despite careful application, have them readjusted or relined. If clutch "grabs" and spins the wheels in starting, have it fixed.

Check tire pressures at least once a week, preferably twice, and after sharp temperature changes. When tires ride hard because driving has warmed them up and raised the pressure, do not let the air out. Keep all valve caps screwed tight.

Avoid holes in the road, loose stones, broken glass and sharp bumps. Reduce speed on rough roads. Stay off unsurfaced roads if possible. Park slowly to avoid hard blows against curbstones; do not rub tires against them.

If a tire goes flat, *drive no further* on it. Stop gradually, well off the road if possible. Be alert to detect a soft tire by the way the car handles. A soft rear tire makes the car "wander" from side to side. A soft front tire "pulls" steadily to one side.

See that front wheels have good alignment and that no wheels wobble. Check front wheel toe-in on a drive-over gauge monthly, and after striking rocks or curbs with force. Wide variations from normal toe-in should be corrected. If tires show abnormal wear or cupping in 40 s., "caster" and "camber" angles of front wheels should also be adjusted.

Examine tires frequently for cuts; remove imbedded stones, glass or nails. Have a tire repair man treat (preferably vulcanize) deep cuts. Keep tires free of grease and oil, and out of strong sunlight as much as possible.

Switch tires every three or four thousand miles to equalize wear. Include the spare if serviceable. If your

tire-rotating plan retains front tires on front wheels, interchange front wheels and reverse the tires, inside to outside, on their rims.

Small nail holes in a casing are self-sealing; a cold-patch on the inner tube is sufficient for repair. Larger cuts reaching to or through the cord fabric and breaks that show up inside the casing should be vulcanized. If you still can get it done, have such spot rebuilt. It's an expensive job, but the alternative is slow ruin of the irreplaceable casing.

In general, no "tire savers" that can be painted onto tires, puttied into cuts or squirted into the inner tube will benefit the motorist. The only sound tire-preserving accessories to buy are a tire gauge and hand tire pump.

If you're allowed a new tire, buy a well-built one that will stand many recappings; buy first quality tubes, for they too must last for years.

When you buy a recapped tire, or offer one for recapping, have the tire put on a spreader and inspect the inside carefully. No cracks or breaks should show inside, and rebuilt spots must be small. Have your tire recapped as soon as the light colored breaker strip shows through the tread unless other injuries preclude recapping; casing with fabric plies worn through is unfit for retreading or recapping.

Recapped tires cannot stand the wear and tear new ones can. Be particularly careful to keep speed down if your car is running on recaps.

When rebuilding and vulcanizing will no longer help the carcass of the tire, a reliner over the whole casing interior may still add several thousand miles of use to the tires if applied with care and skill, but very slow driving and careful maintenance of tire pressure are essential. Never install a reliner, boot or blowout patch in a casing that vulcanization will repair, as the casing will eventually be chafed to the point of ruin.

Do not have tires regrooved or recut if they're worn smooth. Cutting detracts from the tire's already limited strength. Smooth tires have the advantage of less rolling resistance; they are safe provided speeds are kept very low on slippery pavements.

From the *Reports*, February 1942, June 1942 and September 1942.

USED CARS

Here are some rules and tests to help you buy a used car. But first make sure that you absolutely must have one.

Stick to simple models, e.g., Sixes instead of Eights.

Favor lower-priced newer cars as against older models of expensive cars. Cost of parts and operating expense is less for smaller cars.

Buy from a dealer of good reputation, preferably in your own neighborhood. Get him to guarantee the car in writing for a stated period, or to share the cost of repairs over the period. Identify the car by motor number and year in the National Automobile Dealers Ass'n's catalog or other trade book. Cars built late in a model year are apt to be better buys.

Inspect the car in bright light, not in a garage. These are signs that the car has been damaged: body dents that have been filled in; new fenders, running boards or bumpers; doors that spring or drag (when you drive the car, test these with one wheel on the curb, so that the car is on a slant).

Disregard speedometer mileage. These are signs of hard usage: floor mats and pedals that have been replaced or show hard wear; sharp ends of broken springs in the upholstery; a repainted body. Inspect tires for re-grooving (which adds nothing to the life of smooth tires).

Make the following tests for mechanical defects:

Push clutch pedal with one finger; there should be at least an inch of free play. Test steering wheel for play; over two inches of rim travel is excessive, and adjustment isn't always possible.

Apply brakes hard (hold pedal down two minutes if hydraulic); two inches should remain between foot and floor.

With ignition switch off, press starter switch briefly 8 or 10 times. Worn or broken teeth will clash or grind.

Check front-wheel alignment on a floor-pan gauge. By shaking one front wheel to and from you while someone applies the foot brake, test for looseness of king pins (have the wheel jacked up if possible).

Look under the car for oil leaks.

Open the hood and look for water leaks (dusty or

rusty stains or brown froth). If fan belt has been renewed, mileage is probably above 30,000 miles; if it is worn on one side, pulleys are out of line.

Look at battery connections for corrosion; have the battery checked before you buy the car.

Start the engine and let it warm up. (Clicks or knocks are a bad sign). Then put gears in high, set hand brake hard, gradually open the throttle and let back the clutch. The clutch should take hold gradually, not grab or slip. The engine should finally stall; if it doesn't, reject the car. Also reject a car that emits blue smoke at the exhaust when you race the motor.

If possible, make the following driving tests:

Put 40 lb. of air in all tires and drive a short distance over a rough street to bring out body looseness, squeaks, rattles; spring shackles that have been drawn up tight to stop rattles will cause a choppy ride.

To determine unsafe sticking of steering gear, turn corners sharply in both directions. On a level surface with no cross wind the car should travel a block without drifting. Watch the car as it is driven toward and away from you to see that wheels don't wobble. Reject the car if rear wheels don't follow in the track of front ones.

On a quiet, smooth street listen for pronounced hum or grind of rear axle while (a) accelerating gently, (b) slowing down with foot off accelerator, (c) coasting with gears in neutral. Reject a car with front part of differential case lower than the center of axle if there is any noise.

Make several quick stops while going 20 mph. If car swerves have brakes equalized *before* you buy the car.

At about 12 mph. apply brakes while pressing down accelerator. Do not stall car with brakes until accelerator reaches the floor. Disregard "pinging" noises from engine and listen for hollow knocking from bearings. If some are louder than others, there are loose bearings. Very loose ones are cause for rejection.

With brakes, slow the car in high to 3 mph., then release brake and open throttle halfway. Deficient valves, carburetor or ignition will cause bucking or skipping. Climb a fairly steep hill in high at 12 mph. and open the throttle; the car will buck if ignition or valves are in bad shape.

Accelerate from a standstill to 15 mph. in low gear with throttle wide open. Worn transmission gears or bearings will groan and howl.

Then reduce pressure in the tires to the proper level for the car.

Set the car moving forward, then backward, several times, by releasing the clutch gently. A worn clutch will engage with a jerk; a warped one will cause chatter and vibration. Looseness in universal joints, etc., will also show up.

If possible, test the car on a trip. The oil level on the dipstick should not fall more than $\frac{1}{4}$ inch in 50 miles. Check the gasoline mileage with a tenth-gallon or other mileage tester.

After driving some distance, check for water leaks and overheating. See that brakes will maintain their power on a long hill when hot. Check the road-holding ability of the car at good speed over a rough road. Reject it if it does not handle safely.

From the *Reports*, February 1942.

MISCELLANEOUS

FOUNTAIN PENS

Don't try to get a fountain pen now unless yours is so badly damaged it can't be repaired. For supplies of pens in the medium price range are low, and such pens are hard to get.

Pens selling for from \$3 to \$5 are basically as good as more expensive ones. Pens costing more than \$5 have no better workmanship or basic materials, merely more expensive design or decoration. If possible buy standard makes rather than so-called "jobber-assembled" pens, which consist of different parts from many makers (the source changing from time to time), often assembled without skill or care.

A good pen should not scratch when tried out without ink; it should write smoothly; the ink should start to flow rapidly and should continue to flow evenly and without interruption.

A good gold pen point should last at least 10 years. The best are made of 14K gold. The gold content is stamped on the point. Avoid 10K or 12K points, as they are brittle and often split or crack. Cheaper pens with gold plated steel points tend to become corroded by ink.

Gold points are generally tipped with iridium alloys to give a hard, durable writing surface. The most satisfactory tips for steel points have additional material—an iridium or osmium alloy—welded on the point. Less satisfactory than iridium reinforcement, but better than plain points, are those on which the steel tip is so bent as to give a smooth writing surface.

Proper setting of the point is a sign of good workmanship. The point should fit so snugly against the end of the feed that a thin piece of paper cannot be inserted between the two parts. The two legs of the point should not cross or spread.

The section—the piece at the end of the barrel through which the feed and point project—should be made of hard rubber. If made of celluloid, it may become so tight (because celluloid shrinks) that the point often cannot be dislodged.

The filling device must create a good vacuum if the pen is to hold a large supply of ink. Be sure that a sac filler (operated by a lever at the side or end of the barrel) has the rubber sac glued to the sides of the section. A good "sacless" (plunger filled) pen has a small rubber sac at the end of the barrel. Plunger type pens with no sac tend to leak and their plunger packings are apt to be eaten away by direct contact with the ink.

A pen that holds 1.5 cc. (about 30 drops) of ink is adequate for most purposes. Almost any pen may leak or flood when the ink reaches a low level; the best preventive measure is to keep your pen well filled.

In past tests CU found *Waterman*, *Shaeffer* and *Parker* pens ranging in price between \$2 and \$5 to be of consistently good quality.

Care of your fountain pen is more important now than ever. Don't mix two kinds of ink; they may react chemically and clog the pen. Before you change brands, flush the old ink out thoroughly and wipe the point clean. Flush the pen thoroughly if it will not be in use for any length of time; if ink is left in it, the rubber may deteriorate and the metal parts corrode. (See "Ink," below.)

If your pen needs repair, have it done now. With ordinary use a good pen should need nothing more than a new sac every few years. But even if the point is broken or split, or the feed, clip or lever broken, the repairs should be a small fraction of the original cost of a good pen. It isn't worth while to have 25¢ or 50¢ pens repaired.

From the *Reports*, September 1942.

INK

CU's tests on ink covered only the standard colors—black, blue, and blue-black.

Evenness of color is important. CU determined evenness by means of a "streak test," in which a measured amount of ink was allowed to run down a sheet of bond paper, fixed at a 45° angle. After drying, all portions of the streak should be the same color, the edges should be even, and the ink should not strike through to the back of the paper.

(Continued next page)

Permanence: To test, the inks were spread evenly on paper, and part of each sheet was exposed to strong sunlight for 96 hours. Sixteen of the 33 inks tested faded excessively.

For school use, and for most home use of ink, washability is a highly desirable characteristic. On the other hand, inks that do not wash out are essential for permanent records. Inks which are labeled neither as permanent nor as washable are generally of the non-washable type. All those labeled washable were found to be washable.

Stability of the ink, that is, its ability to remain in solution without forming a muddy precipitate, becoming moldy, or otherwise changing noticeably in character, is important for all uses. All the inks tested were satisfactory in this respect.

When your fountain pen clogs the ink is not likely to be at fault. A fountain pen can't take mixed inks. Though each of two inks may itself be clean and remain so for an indefinite period, two different inks mixed together are likely to be incompatible, and some solid, clogging ingredients may be formed in the mixture. Therefore, stick to one brand and one color for your fountain pen. When you do change to another ink, be sure to wash the pen out thoroughly with lukewarm water, filling and emptying the ink sac several times.

Fountain Pen Inks: Practically any ink on the market is satisfactory for filling fountain pens.

There is an exception: *Parker's 51* is made for a specially constructed pen of the same name. The point of this pen is enclosed in a sheath, and it does not work satisfactorily with ordinary inks. Nor is *Parker's 51* ink good for general use. Its extreme fluidity may tend to cause leakage; it dries very fast, and has a tendency to be streaky.

But most often, leaky pens cannot be blamed on the ink used. Pens have a tendency to become leaky when they are not full enough. Then the heat of the hand may cause expansion of the air bubble above the ink, and force ink down through the point.

Corrosion: All inks tend to corrode steel pen points somewhat; those which caused excessive corrosion of steel pens are so marked in the ratings.

Thirteen blue-black, nine blue, and ten black inks were

subjected to tests in CU's laboratory. All were measured against a standard ink.¹

From the *Reports*, September 1943.

ACCEPTABLE

The following inks passed all of the tests performed. Brands are listed in order of increasing cost per fluid ounce. Figures in parentheses represent cost per fl. oz.

Woolworth Blue-Black. 5¢ for 2 fl. oz. (2.5¢). Available in Woolworth stores.

Fre-Flo Washable (Black Crescent Products Co.). 5¢ for 2 fl. oz. (2.5¢). Available in H. L. Green stores.

Le Page's Blue-Black. 10¢ for 2½ fl. oz. (4¢). Nationally available.

Skip V-Black (W. A. Shaeffer Pen Co.). 15¢ for 2 fl. oz. (7.5¢); 25¢ for 4 fl. oz. (6.3¢). Nationally available.

Skip Washable Black. 15¢ for 2 fl. oz. (7.5¢). Can be purchased in quart bottles for 95¢ (3¢). Nationally available.

Quink Washable Black (Parker Pen Co.). 15¢ for 2 fl. oz. (7.5¢). Can be purchased in quart bottles for 95¢ (3¢). Nationally available.

The following inks were satisfactory where permanence was not essential. They are listed in order of increasing cost per fluid ounce.

Macy's Blue-Black. 9¢ for 4 fl. oz. (2¼¢). Faded excessively in sunlight. Available in Macy's department store, NYC.

Fre-Flo Blue-Black. 5¢ for 2 fl. oz. (2.5¢). Faded noticeably in sunlight. Available in H. L. Green stores.

Executive Blue-Black (Kress Stores) 5¢ for 2 fl. oz. (2.5¢). Faded noticeably in sunlight. Available in Kress stores.

Standardized Blue-Black. 12¢ for 4 fl. oz. plus postage. (3¢). Faded noticeably in sunlight. Sold by mail by Cooperative Distributors, NYC.

Winner Blue-Black. 5¢ for 1¼ fl. oz. (4¢). Faded excessively in sunlight. Not labeled washable but washed out in water. Available at Woolworth stores.

¹ The standard ink was made according to the Federal Specification for permanent blue-black ink, as follows:

10 parts gallic acid

1 part tartaric acid

15 parts ferrous sulfate

3½ parts standard blue dye

Water to make 100 parts (Continued next page)

ACCEPTABLE—CONT'D

Le Page's Blue. 10¢ for 2½ fl. oz. (4¢). Faded excessively in sunlight. Nationally available.

Higgins' Washable Blue. 10¢ for 2½ fl. oz. (4¢). Faded noticeably in sunlight. Nationally available.

Waterman's Washable Blue. 10¢ for 2 fl. oz. (5¢). Available in quart bottles for 95¢ (3¢). Faded noticeably in sunlight. Nationally available.

Inc Blue-Black (F. E. Everson). 15¢ for 2½ fl. oz. (6¢). Faded excessively in sunlight. Not labeled washable but washed out in water. Available at Dennison Stores.

Skrip Blue-Black. 15¢ for 2 fl. oz. (7.5¢). Available in quart bottles for 95¢ (3¢). Nationally available.

Skrip Permanent Royal Blue. 15¢ for 2 fl. oz. (7.5¢). Available in quart bottles for 95¢ (3¢). Faded excessively in sunlight. Nationally available.

Quink Washable Blue. 15¢ for 2 fl. oz. (7.5¢). Available in quart bottles for 95¢ (3¢). Faded noticeably in sunlight. Nationally available.

Skrip Washable Blue. 15¢ for 2 fl. oz. (7.5¢). Available in quart bottles for 95¢ (3¢). Faded noticeably in sunlight. Nationally available.

Quink Permanent Black. 15¢ for 2 fl. oz. (7.5¢). Available in quart bottles for 95¢ (3¢). Washed out in water despite claim of permanency. Nationally available.

Quink Permanent Blue-Black. 15¢ for 2 fl. oz. (7.5¢). Available in quart bottles for 95¢ (3¢). Faded noticeably in sunlight. Nationally available.

The following inks are not recommended for use with steel pens as they caused excessive corrosion.

Waterman's Permanent Blue-Black. 10¢ for 2 fl. oz. (5¢). Available in quart bottles for 95¢ (3¢). Excessive corrosion of steel pens.

Carter's Blue-Black. 10¢ for 2 fl. oz. (5¢). Available in quart bottles for 85¢ (2.7¢). Excessive corrosion of steel pens.

Carter's Travel Ink. 50¢ for 1 fl. oz. Specially packaged for travelling so that ink does not spill. Excessive corrosion of steel pens.

Carter's Permanent Blue. 10¢ for 2 fl. oz. (5¢). Available in quart bottles for 85¢ (2.7¢). Faded excessively in sunlight and caused excessive corrosion of steel pens.

ACCEPTABLE—CONT'D

Carter's Permanent Black. 10¢ for 2 fl. oz. (5¢). Available in quart bottles for 85¢ (2.7¢). Excessive corrosion of steel pens.

Waterman's Permanent Black. 10¢ for 2 fl. oz. (5¢). Available in quart bottles for 95¢ (3¢). Excessive corrosion of steel pens.

Penit Blue-Black (Sanford Ink Co.). 15¢ for 2 fl. oz. (7.5¢). Available in quart bottles for 95¢ (3¢). Noticeable fading in sunlight and excessive corrosion of steel pens.

Penit Permanent Black. 15¢ for 2 fl. oz. (7.5¢). Available in quart bottles for 95¢ (3¢). Excessive corrosion of steel pens.

Le Page's Signet Black (Russia Cement Co.). 10¢ for 2½ fl. oz. (3.6¢). Excessive corrosion of steel pens.

NOT ACCEPTABLE

The following inks were not acceptable because of faulty writing ability.

Higgins' Eternal Black. 15¢ for 3½ fl. oz. (4.6¢). Uneven writing with light and dark streaks.

Penit Permanent Blue. 15¢ for 2 fl. oz. (7.5¢). Available in quart bottles for 95¢ (3¢). Excessive fading in sunlight. Streaked writing with light and dark streaks showing.

Parker's "51" Tunis Blue. 25¢ for 3 fl. oz. (8.3¢). A special ink formulated for a special pen. Its extreme fluidity and rapidity of drying may cause the streaky writing as evidenced in the streak test, although it may be satisfactory when used with the special "51" pen.

MECHANICAL PENCILS

Production of mechanical pencils has been curtailed but they are still on the retail market. Style and trimming material distinguish \$2 or \$3 mechanical pencils from 25¢ ones. Except for a few automatic-type pencils, mechanisms differ very little.

Most mechanical pencils have "screw feed" movements to propel and repel the lead. These exist in two equally good types of inner mechanism. The lead is pushed back and forth either by turning the writing tip (front action) or the eraser end (rear action). Or the barrel of the pencil may be divided in half and the lead moved by turning one-half of the barrel. Which model

you buy depends mainly on personal preference, though front action pencils are frequently somewhat difficult to operate, because of the limited gripping space on the metal tip.

Automatic pencils have no screw movement; lead is fed into the tip by pushing down on the eraser end of the pencil. New leads are fed from the magazine automatically. All tested by CU performed satisfactorily, but some users report difficulty with clogged mechanisms.

Length and thickness of leads vary. Thin leads permit finer work but break more easily. Short leads require frequent reloading, but a pencil using them can have larger magazine capacity without an increase in its thickness. If you don't object to a thick pencil, you can get one using 4-in. lead with a capacity of 12 leads.

Different samples of the same brand and model may vary considerably. Examine any pencil well before buying; check particularly the following points:

The movement should operate easily. There should be almost no "play" in the movement; extend the lead to writing position, press against the point and see if there is any back and forward motion of the lead. Pull on the lead to see if the clutch in the movement holds it firmly. The lead should fit snugly within the metal tip. The pencil should be able to expel it completely, to prevent clogging the metal tip.

The magazine and the eraser should be readily accessible; the eraser should fit firmly in its holder.

From the *Reports*, January 1942.

TOYS

Because of lack of metal and rubber many familiar toys have disappeared from the market. Plastics, plywood and some other woods sought by manufacturers as substitutes are in many cases under priority orders, and toy supplies have been seriously reduced as a result.

Canvass your friends for hand-me-downs; repair old toys; improvise new ones. Soap boxes are still good material for toy making.

Erector sets, Meccano sets and electric trains are not being manufactured for the duration. Plastic and metal toys and musical instruments (of doubtful play value at best) are disappearing. Rubber balls are scarce.

Books for all ages are plentiful. Suit the book to the child;

librarians frequently have lists for various ages. Geography is becoming thrilling to the child from nine up, and a subscription to *National Geographic Magazine* (National Geographic Society, Washington, D. C., \$4 a year) will bring much pleasure. A good magazine for the child from five to ten is *Child Life* (729 Boylston St., Boston, \$2.50 a year); a child from six to thirteen will enjoy *Story Parade* (100 Fifth Avenue, NYC, \$2 a year).

When choosing toys, always buy with an eye to durability. Look for tightly attached wheels, properly fitted parts, smoothly running mechanisms. Make sure toys for small children don't have lead paint; vegetable paint is safest. Toys made of plastics should not be breakable. Toys with sharp corners should be avoided whenever possible. See that kiddie cars and tricycles are well-braced, not easily tipped, and that their weight bears some relation to the weight of the child who will use them.

Select toys which a child can use and manipulate rather than those he can merely look at. Avoid playthings which require only passive attention. A truck which only goes around and around once it is wound up lacks the appeal of a truck which can be really loaded and unloaded and sent places.

Choose toys according to a child's capacity for play. Don't give a two-year old a plaything suitable for a six-year old. The following list of toys is graded by age suitability.

Under one year: Washable animals, with no parts that might come off and be swallowed; wooden beads strung tightly on stout string; rattles.

One to Two: Gadgets than can be fitted together, such as nested boxes and simple peg boards; durable stuffed animals with no loose eyes; bells to ring; a large brightly-colored ball to throw; an undressed, unbreakable doll; toys to push or pull.

Two to Four: Large blocks of the nursery school type (start with not more than a dozen, and increase the number as the child's interest develops). These are available (but expensive) in most department stores, or a good carpenter can make them from measurements obtainable from any nursery school. Educational Equipment Co., 69 Bank St., NYC, and Cooperative Distributors, NYC,

(Continued next page)

ship blocks of this type by mail.

Housekeeping toys, such as dishes, laundry equipment, cleaning equipment, related in size to each other if possible; miniature automobile and dump trucks; unbreakable dolls (for both boys and girls) with movable arms and legs and with squares of cloth to dress them in; big balls with rough texture for throwing and catching; blunt scissors; big thick crayons, with 12 by 18-inch paper on which to use them; picture books with large pictures and few words; inch-size wooden beads to string on shoe laces; musical instruments such as a small drum, clappers, tambourine; bingo-bed hammer sets; interlocking wooden trains.

Outdoor toys such as wagons, wheelbarrows, kiddie cars with pedals (if you know that there's a place where the child can use them), sand toys, more "push-and-pull" toys.

Four to Six: Carpentry equipment of the simpler sort—a good hammer, with a broad head, a good child's size saw, big nails, and soft wood boards. Avoid cheap workbenches already equipped; they usually have too many tools of poor quality.

Dress-up costumes, play-stores, scrapbooks, simple paper dolls, simple large puzzles; showcard colors with inch-wide paint brushes and large paper; soap bubble sets, *Tinkertoy* sets, games such as object lotto, animal lotto, dominoes (with symbols instead of numbers); picture books and simple stories, well illustrated.

Six to Eight: Games such as parcheesi, lotto, dominoes; marbles; balls of all kinds; table tennis sets, workbenches, additional equipment such as screwdrivers, saws, etc.; more complicated puzzles, cut-outs; roller skates; simple hand puppets; printing sets; more complicated put-together toys; more books. Tricycles, wagons, and scooters are good also for this age.

Eight or over: Find out about the child's hobbies and collections, and give toys which will help to develop them. Cameras can be handled by ten-year-olds.

Good small microscopes; a telescope (be sure the lens is reasonably good); chemical sets of varying elaborateness (start with the simplest). Avoid lead-casting outfits because of lead poison hazard.

Sports equipment, musical instruments, music or danc-

ing lessons—if you're sure the child wants them.

Give model building sets to a child of ten or over. Interest in, and ability to make, models seems to be most intense at this age. Make sure accompanying instructions are clear.

A good phonograph is suitable for a child of any age. Avoid the cheap, tinny toy phonographs with scratchy records sold in toy departments. Long-wearing, good recordings of nursery and other suitable music, clearly sung and played, are made by Victor and Decca.

Don't give large toys, such as ping-pong tables, gymnasium outfits, etc., to children unless their parents have approved your choices in advance. Space in which to use them may be limited.

At Christmas time shop the five-and-tens for small "stocking" gifts. Any child will like rulers, glue, folding rules, a level, small puzzles, etc.

It is the opinion of most educators that guns, when used as dramatic play material by a child only normally interested in such play, are not harmful, especially if such equipment is necessary to make him "one of the gang."

TYPEWRITER RIBBONS

Typewriter ribbons are made in a variety of weights and inkings to suit the needs of individual typists and typewriters. CU found a medium-inked, medium-thick ribbon practical for most jobs.

Specifically, light- to medium-inked ribbons were found to be best for typewriters with Elite type; medium to heavy inking for Pica type, and medium to extra heavy inking for Gothic type. Special inking, as well as specially thin fabric, is required for ribbons used on noiseless typewriters, since such machines do not hammer the ink into the paper but deposit it on top, where it may smudge before it is absorbed.

To keep the typewriter ribbon in good condition, alternate the sides occasionally, instead of using up one half before turning it over or shifting. The ink evaporates, and if a shift is made only after one side is badly worn, the unused surface will type much more lightly than it would have originally. A used ribbon can be darkened somewhat with a few drops of household oil on the wound bobbin. Oil it through the holes on the face of the spool, not on

the circumference, and permit the oil to be absorbed over-night.

Results of tests on ribbons for both standard and portable machines showed little correlation between price and quality. Since the inking was found to be poorer in portable ribbons and since portable ribbons are generally the same length and width as standard ribbons, it's good economy to buy a standard ribbon for a portable. You can then rewind the ribbon onto the portable spool, performing this operation right in your typewriter. In the case of the *Remington* portable which takes only six yards, you can save doubly by getting a standard 12-yard ribbon and cutting it in two.

From the *Reports*, April 1941.

TYPEWRITERS

Typewriters can't be bought by individuals for the duration. Even renting a machine requires a rationing certificate from your local OPA board. Repair of your old machine does not require a priority, but competent service men are scarce. CU therefore suggests a few preventive measures and some hints for judicious home repair to keep your old typewriter going.

Slamming back the carriage can easily upset the left-hand margin adjustment, resulting in jagged alignment; and readjustment may be a difficult procedure. When the keys pile up, they should be disentangled with care and patience. Don't attempt to force the last letter of a line when you've run past the bell to the lock. Use your margin release. Don't force heavy manila envelopes into a portable. Address them by hand.

The typewriter should be operated on a desk, table, or substantial stand. More portables are seriously damaged by falling than in any other way.

Keep your typewriter clean. Make erasures with the carriage swung far out so that the debris does not filter through the mechanism. Protect the machine from dust with a cover or case when not in use.

A dirty typewriter may be sluggish in action, with the keys piling up. Oiling will often only make matters worse by packing the dirt in the key slots where no toothbrushing will effectively remove it.

The best way to clean out loose dirt is to take your typewriter to an automobile service station, and have it blown clean with compressed air. Next best is the blower attachment of your vacuum cleaner if it has a

nozzle with a small opening. Remove the ribbon, and clean the type faces with needle and brush and carbon tetrachloride or gasoline, but don't oil it before blowing. After blowing, oil liberally. Wipe off obviously excess oil, and reblow thoroughly. This second blowing will further remove excess lubricant and spread remaining oil in a thin, rust-preventing coat.

Dirt is not always responsible for sticking keys. The cause may be a bent bar which presses against the key guide (the slot just in front of the ribbon). This is easily corrected by bending the bar judiciously in the opposite direction. Operating the key or bar very slowly will disclose whether it is sticking in the slot—because of dirt—or in the guide.

Give your machine a periodic tightening up. The tools: a 6- or 8-inch screwdriver; a small "utility" type screwdriver with a 2-inch blade; and a pair of long-nose pliers. Tighten every screw you can find. In tightening screws, watch out for those that *appear* to be considerably unscrewed, but which are tight. These screws are probably held by lock-nuts in that particular position to maintain some special adjustment. Do not force them.

From the *Reports*, March 1943.

GROWING VEGETABLES

You can grow something edible on almost any piece of ground that has six hours' full sunshine a day and is not filled with tree roots.

If your own back yard is unpromising, try to get the use of a better plot.

There is not enough first-rate sunny fertile soil for everyone, however, and most home gardeners must work with land that is far from ideal. In judging the value of a plot, points to remember are these:

1. As already mentioned, sunlight at least six hours a day is essential.
2. A source of water nearby is very desirable, but if it isn't available, you can get along by using a mulch (a thick layer of peat, hay or similar material covering the surface of the ground around the plants) which will conserve water.
3. Your garden should not be near such trees as elms, willows or silver maples, whose roots range far. Even shrubs should not be too close. *(Continued next page)*

4. A heavy growth of grass or weeds over the plot indicates fertility, but the land will be very hard to prepare. Besides, sods harbor various pests which feed on root crops like carrots or beets. Shaken out sods can be put on the compost pile. If there is witch grass, its white jointed roots should all be picked out or it will rise again to choke your crops.

5. Recently filled land and soil containing too much gravel, sand or clay present a big handicap. However, a heavy application of organic material (preferably manure), lime if the soil is acid, and plenty of fertilizer will improve both sandy and clayey soils.

6. If the area is constantly wet do not use it if you can get a dryer spot. For with the best treatment your crops will be late and restricted in variety.

Crops: For food value and yield per square foot in average soil, the best crops are tomatoes, snap beans, carrots, cabbage and greens such as chard, spinach, broccoli and lettuce. Others in descending order of both food value and ease of culture are beets, sweet corn, radishes, peppers, Chinese cabbage, peas, cucumbers, squash, celery, onions.

Real rotation of crops is impracticable in a small garden. The home gardener's substitute is to try to plant beans, cabbage, carrots, lettuce, potatoes, and tomatoes in a different spot each year, and if possible to run all the rows at right angles to their direction of the year before.

Soil: Choose crops adapted to your soil, location and equipment. Otherwise you will have only trouble for your pains.

In rather dry soil (though any vegetable needs water) you can grow snap beans, carrots, chard, cucumbers, squash, sweet corn, peppers.

In freshly turned sod: tomatoes, beans, cabbage, corn, peas, squash, egg plant. (But take care, before you plant anything, to put the sods deep and upside down, leaving no air holes.) Do not plant root crops — beets, carrots, potatoes, etc.

In very acid soil: no vegetables, but strawberries, blueberries, watermelons.

In soil a little less acid: parsley, potatoes, radishes.

In "sweet" (alkaline) soil: spinach, celery, asparagus, beets, cauliflower, leeks, lettuce, muskmelon, onions, salsify.

These will fail in acid soil, and in average soil are the vegetables most likely to need lime.

In soil low in organic matter, but with plenty of water and fertilizer: tomatoes, snap beans, sweet corn, peas, beets, cabbage, carrots, cucumbers, Summer squash, chard. These are the crops to grow if your soil is poor and you cannot add plenty of manure, compost, or peat.

In shade part of the day: cabbage, kale, lettuce, spinach (but no vegetable really prefers shade).

Seldom requiring protection by means of insecticides and fungicides: carrots, beets, lettuce, spinach. Unless you are prepared for trouble do not grow tomatoes (flea beetles, horn worm, blight) potatoes (potato bugs, flea beetles, blight), beans (Mexican Bean beetle), squash, cucumbers (vine borer, striped beetles).

Vegetables prefer soil which is slightly acid (pH 6.5). If the garden is new you will not know whether your soil is too acid or not unless you have had it tested, and you must not add lime or wood ashes to "sweeten" it on general principles. Too much is worse than none. Correcting acidity is more important than usual because lime releases the plant food that is locked up in acid soil. Do not try to test the soil yourself. Your State Agricultural Experiment Station, county agent, or perhaps some expert attached to your local Victory Garden Committee will do it for you.

To take a soil sample for test, dig a hole six inches deep, then take a downward slice on the side of the hole with a trowel, and send a half-pint jar of this to be tested. On the basis of the test, reliable recommendations can be made for the exact quantities of lime, fertilizer and organic material required. Do not take recommendations from uninformed persons. If you know the history of your plot you may be able to judge for yourself. If beets grew there successfully the preceding year, the soil does *not* need lime.

For the average back yard soil, which is acid, *very* low in plant food and poor in texture, an adequate recommendation would be, per 1000 square feet:

1. Broadcast 40 lb. ground limestone and 40 lb. 16% superphosphate.
2. Spread $\frac{1}{2}$ cord fresh horse or cow manure or a 4-inch layer of compost or limed peat.
3. Mix thoroughly with the soil by deep spading, plowing, or rototiller.

(Continued next page)

4. Broadcast 20 lb. hydrated lime or 40 lb. limestone and harrow or rake in.

5. Broadcast 30 lb. 5-10-5 fertilizer. Harrow or rake in at right angles to the first leveling. This work can all be done and the seed sown in one continuous operation, but it is a good idea to fertilize only the early planted part of the garden before the harrowing or raking (4). The rest can be raked in just before making late sowings or plantings.

Planting: Many novices make the mistake of planting the whole garden at once. Vegetables are here grouped according to the earliest date of planting, the earlier first:

1. *Hardy crops:* Spinach, peas, lettuce (seed or plants), radishes, chard, beets (seed or plants), carrots, turnips, onions (seed, sets or plants) can be planted as early as the ground can be prepared. The time varies, according to the season and the locality.

2. *Less hardy crops:* Beans, broccoli (seed or plants), cauliflower (seed or plants), corn, potatoes, Summer squash—should be planted when the weather has settled and danger of frost is about over—about a month later than the time for hardy crops.

3. *Tender crops:* Cucumbers, New Zealand spinach, peppers (plants), tomatoes (plants), Fall and Winter squash—should not be planted until the ground is warm and all danger of frost is over—perhaps two weeks later than the "less hardy" crops.

Certain crops are sown at particular times to escape hot weather or special insects or diseases. For example, cauliflower is set only in early Spring or in midsummer, Chinese cabbage not until July, turnips after July 25.

For storage, crops are planted at the latest date which will give them time to mature before killing frosts. This time varies with the locality and will be found in your State bulletin on home gardening.

Succession planting continues until the latest safe date for the particular crop. Beets, lettuce, spinach, and possibly beans are planted latest of all.

Novices should buy plants of lettuce, onions, cabbage, cauliflower, peppers, tomatoes and melons, rather than start them from seed. Buy from good commercial growers, not from florists, hardware, ten-cent, or department stores. Insist on good stocky plants. Toma-

toes and melons are best from pots.

Manure should be dug in deep, so that it will not touch seeds or roots of early set plants, and should not be used at all for potatoes. The soil should be well pulverized. Break lumps and rake off stones and trash. Fertilizer should be broadcast *evenly* and mixed in.

Sow seed after, not before a shower. Use a line to get a straight row. To prevent "damping off" use treated seed or dust it yourself with a fixed copper dust or Semesan. Use only Spergon for limas. Sow seed in a depression (a "hill" is a hollow); only potatoes need the soil banked. The depth to plant varies with the season, kind of soil and size of seed. The rule is four times the diameter of the seed but early sowings are shallower, later sowings deeper; in clay soil shallower, in sandy soil deeper. For small seeds make a furrow about one inch deep, cover one-half inch; for large seeds make a furrow three to four inches deep, cover one inch. Radish seeds will mark the row and break the crust for slow germinating seeds like carrots. Spread cutworm bait just before the first plants emerge and repeat, three or four applications up to June 15.

Summer care. One hour at the right time is worth three or four a few days later. Cultivation should begin as soon as seeds are up or plants begin to grow. How often depends on the weather; during a dry spell it may be omitted for three or four weeks. Keeping the weeds down when they are one inch tall will solve the problem of cultivation. Don't cultivate more than one inch deep, and don't hill up the earth around plants.

Insecticides and fungicides: Good garden practices can do much to keep pests from becoming entrenched. Eliminate ants' nests near plants and keep weeds pulled outside as well as inside the garden, for weeds harbor insects and diseases. Hand pick diseased and infested foliage when it first appears, and burn the debris immediately. Learn to recognize insects and diseases; State bulletins will help you do this.

Diseases can be checked if caught in time—they can even be anticipated. Spraying and dusting must be prompt and thorough, and since effectiveness often depends on exact timing in relation to the life history of the disease or insect, recommendations of local Experiment Stations must be followed exactly. A few

general suggestions for economical and effective application and timing are:

1. Apply dust when the air is still—early morning or late evening is best.
2. Make sure your equipment is in good working order. Sprayers should give a fine mist, not a shower.
3. Apply fungicides before rather than after rain; keep the whole plant covered with a protective film.
4. Apply insecticides after the insects appear, but before they have become established; young insects are comparatively easy to kill.
5. Learn when to expect attack and examine plants regularly for the first appearance of pests.
6. Use the right kind of spray or dust for the particular pest. Fungicides do not kill insects, nor do insecticides check disease, and an aphicide like *Black Leaf 40* will not kill beetles.

HAVE ON HAND:

The latest edition of your State's bulletin on control of insects and diseases.

A sprayer and/or duster of correct size for your garden.

Paris Green to make bait for cut-worms, slugs, grasshoppers or crickets. Mix $\frac{1}{4}$ lb. with 1 peck (5 lb.) bran, 1 pt. molasses (cheap grade from the feed store), 2 qts. water. Mix dry ingredients first. Three applications will be needed. This bran bait is better than commercial preparations, and is *not* attractive to birds. Paris Green is poisonous; care should be taken in its storage and use.

Apex Ant Killer.

Copper Dust (*Cuproicide, Metrox* or *Redoxide*). Small quantity for seed treatments.

In addition, if you have only a duster: 2% Nicotine dust for aphis; most efficient on a hot day, Pyrethrum dust (preferably *Pyrocide*) for worms, caterpillars, beetles, leaf-hoppers, some kinds of aphis.

Copper dust (*Cuproicide, etc.*) or Copper-rotenone dust (if you can buy any) fungicide for dusting. The copper-rotenone dust will also kill insects at the same time.

To use in a sprayer:

Black Leaf 40 for aphis, leafhopper, and other soft bodied sucking insects. 1 teaspoonful in 1 gal. water in which soap has been dissolved. *Always* use soap.

Pure soap flakes or beads to use with the above. Do not use any containing builders, which will burn the foliage.

Multicide, or other pyrethrum spray, for worms, caterpillars, beetles, leafhoppers, some kinds of aphid.

Powdered copper sulfate and spray lime for making bordeaux (or ready mixed bordeaux powder). For diseases of vegetables.

From the *Reports*, April 1943.

VEGETABLE SEEDS

The following sources of supply are rated for the consistent quality of their seed strains.

BEST SOURCES

Joseph Harris Co., Inc. (Rochester, N. Y. Stores in Syracuse and Buffalo, N. Y., Cambridge, Mass.).

Ferry-Morse Seed Co. (Detroit and San Francisco).

The best commission packeters.

Eastern States Farmers' Exchange (Springfield, Mass.).

All seed treated against disease. Sells only in its territory: all New England, Maryland, Delaware, and all Pennsylvania except 13 counties bordering New York State.

Francis C. Stokes Co. (Moorestown, N. J.). Tomatoes only.

F. H. Woodruff & Sons (Milford, Conn.).

GOOD SOURCES

Abbott & Cobb (Philadelphia).

Comstock Ferre Co. (Wethersfield, Conn.).

F. W. Eberle (Albany, N. Y.)

Alexander Forbes & Co. (Newark, N. J.).

Glick's Seed Farm (Smoketown, Pa.). Tomatoes only.

Peter Henderson (NYC).

Livingston Seed Co. (Columbus, Ohio). Tomatoes only.

Robson Seed Farms (Hall, N. Y.). For hybrid corn.

Walter L. Schell (Harrisburg, Pa.).

Stumpp & Walter (NYC).

Vaughan's Seed Store (Chicago & NYC).

O. H. Will & Co. (Bismarck, N. D.). Varieties for a short growing season, and heat. Not satisfactory south of NYC.

NOT GENERALLY ACCEPTABLE

Some seed good, but in the opinion of CU's consultants quality too variable, at best.

W. Atlee Burpee Co. (Philadelphia).

NOT GENERALLY ACCEPTABLE—CONT'D

Breck's (Boston).

Lakeshore Seed Co. (Dunkirk, N. Y.).

The great majority of city seed stores. The great majority of commission packeters. These are the companies who get out the gaily colored packets displayed on racks in hardware, department and ten-cent stores, and at florist's shops.

SPRAYERS AND DUSTERS**BEST BUYS**

Handy Box Duster (Clean Home Products Co., Chicago). Made of cardboard, cheap. Buy at least four if you have no sprayer. (No longer made, but may still be available in stores.)

Feeny; Pomogreen; Eastern States; or Hudson dusters. Plunger type.

Smith Banner Open Top Compressed Air Sprayer (D. B. Smith, Utica, N. Y.). 3 and 4 gal. Perhaps the best type of sprayer for most people.

ALSO ACCEPTABLE

Smith Blizzard Hand Sprayer. 1 qt. Good for about one year.

Sprayit GV7 (Electric Sprayit Co., South Ind.). 1 qt.

Champion Sprayer (Champion Sprayer Co., Detroit). 5 gal. First choice of knapsack sprayers—good, but heavy.

Siren Knapsack Sprayer (E. C. Brown).

NOT ACCEPTABLE

Most Small Hand Sprayers will not last through one season without leaks.

Antipestik. Arnold and Insectogun Hose Sprayers. None of these can be recommended for general use.

References: The two most useful books for small home gardens.

DEMPSEY, PAUL, *Grow Your Own Vegetables* (Houghton Mifflin). \$2.00. The latest developments in cultural methods, insect and disease control and varieties. Plans.

FARRINGTON, E. I. *The Vegetable Garden* (Hale, Cushman and Flint). A handbook for the amateur with small garden space.

HOW MUCH TO PLANT FOR FIVE

Crop	Recommended Varieties	Length of row required (feet)			Seed or Plants per 100 ft. of row
		Fresh	Fresh, Can,	Store	
Snap Beans	Stringless Green Pod or Tendergreen	90	200	200	1 lb.
Snap Beans	Pencil Pod Black Wax	90	150	150	1 lb.
Beets	Crosby's Egyptian or Early Wonder	90	90	90	1 oz.
	Detroit Dark Red or Ohio Canner	0	110	110	1 oz.
Cabbage	Golden Acre or Green Acre	90	90	90	¼ oz.
	Danish Ballhead or Savoy	0	0	55	½ oz.
	Perfection Drumhead				50-65
Carrots	Nantes or Tendersweet	90	200	90	½ oz.
	Danvers Half Long	0	0	200	½ oz.
Chard	Lucullus	20	20	20	1 oz.
Corn ¹	(See footnote)	150	300	300	4 oz.

Lettuce ^a	(See footnote)	75	75	150	$\frac{1}{8}$ oz.	100 to 300
Onions	Ebenezer Danvers Yellow Globe	60	60	200	$1\frac{1}{2}$ lb. sets $\frac{1}{2}$ oz. seed	
Parsnips	Hollow Crown	0	0	200	$\frac{1}{2}$ oz.	
Peas	Thomas Laxton or Laxton's Progress	150	300	300	1 lb.	
Spinach	Long Standing or Summer Savoy	100	400	400	1 oz.	
Summer	Early Prolific or Cocozele	5 hills	5 hills	5 hills	1 pkt. for 5 hills	30
Squash						
Winter	Delicious or Buttercup	0	0	15	3 pkts. for 15 hills	15-30
Squash						
Tomatoes	Bonny Best or Rutgers or Marglobe	90	200	200	1 pkt.	33 flat or 66 trellis

^a Corn (early to late): North Star (Harris), Spaneross, Golden Early Market, Marcross 6.13, Carmelcross, Golden Cross Bantam.

^b Lettuce: Try sowing a very short row of each of two or three different varieties at two-week intervals. Then even in unfavorable weather, at least one should be edible; New York 12, Imperial 44 and 847 according to local requirements (all iceberg type), White Big Boston (butterhead), Trianon (Cos or Romaine), Grand Rapids (leaf lettuce). The last two are the best in hot weather. Buy plants for early crops.

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